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THESIS

**THE INTERNATIONAL LEGAL
IMPLICATIONS OF THE MOBILE OFFSHORE
BASE: NO ARMY OR AIR FORCE IS AN
ISLAND.**

by

Christopher Michael Strub

March, 1997

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Thesis
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REPORT DOCUMENTATION PAGE

Form Approved OMB No. 0704-0188

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1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE March, 1997.	3. REPORT TYPE AND DATES COVERED Master's Thesis
4. TITLE AND SUBTITLE: THE INTERNATIONAL LEGAL IMPLICATIONS OF THE MOBILE OFFSHORE BASE: NO ARMY OR AIR FORCE IS AN ISLAND.			5. FUNDING NUMBERS
6. AUTHOR: Strub, Christopher M.			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey CA 93943-5000			8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSORING/MONITORING AGENCY REPORT NUMBER
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.			
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.			12b. DISTRIBUTION CODE
13. ABSTRACT (maximum 200 words) In light of recent drastic changes in national security concerns, new systems are being considered for future military implementation. One of the major systems under consideration by the Advanced Research Projects Agency is the Mobile Offshore Base (MOB). The MOB entails essentially two to six self-propelled, floating platforms that are connected and used for military presence and/or war-fighting purposes. This thesis examines the question of whether the MOB should legally be considered a warship, a merchant vessel, or structure/installation. This question is important for the answer implies where on the ocean and under what circumstances the placement of the system complies with international law. After a brief review of the national policy with respect to presence and the problem of reduced access to overseas bases, the thesis examines the legal implications of the MOB. The legal analysis starts with the United Nations Law of the Sea Convention (UNCLOS) that entered into force December 16, 1994. Gaps in UNCLOS definitions and policy are explained by general concepts of international law and, where needed, municipal law. The thesis concludes the MOB should be considered a ship and should be given warship status by the United States government.			
14. SUBJECT TERMS: Mobile Offshore Base, MOB, International Law, Vessel, Ship, Island, Structure, and Installation.			15. NUMBER OF PAGES 93
			16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UL

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. Z39-18 298-102

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**THE INTERNATIONAL LEGAL IMPLICATIONS OF THE MOBILE
OFFSHORE BASE: NO ARMY OR AIR FORCE IS AN ISLAND.**

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MASTER OF ARTS IN NATIONAL SECURITY AFFAIRS
from the
NAVAL POSTGRADUATE SCHOOL
March, 1997

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1997.03

Strub, C.

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ABSTRACT

In light of recent drastic changes in national security concerns, new systems are being considered for future military implementation. One of the major systems under consideration by the Advanced Research Projects Agency is the Mobile Offshore Base (MOB). The MOB entails essentially two to six self-propelled, floating platforms that are connected and used for military presence and/or war-fighting purposes. This thesis examines the question of whether the MOB should legally be considered a warship, a merchant vessel, or structure/installation. This question is important for the answer implies where on the ocean and under what circumstances the placement of the system complies with international law. After a brief review of the national policy with respect to presence and the problem of reduced access to overseas bases, the thesis examines the legal implications of the MOB. The legal analysis starts with the United Nations Law of the Sea Convention (UNCLOS) that entered into force December 16, 1994. Gaps in UNCLOS definitions and policy are explained by general concepts of international law and, where needed, municipal law. The thesis concludes the MOB should be considered a ship and should be given warship status by the United States government.

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EXECUTIVE SUMMARY

In light of recent drastic changes in national security concerns, new systems are being considered for future military implementation. One of the major systems under consideration by the Advanced Research Projects Agency is the Mobile Offshore Base (MOB). The MOB entails essentially two to six self-propelled, floating platforms connected and used for military presence and/or war-fighting purposes. This thesis examines the question of whether the MOB should legally be considered a warship, a merchant vessel, or structure/installation. This question is important for the answer determines where on the ocean and under what circumstances the placement of the system complies with international law.

After a brief explanation of the origins of the MOB concept and a working physical description in Chapter I, Chapter II reviews the national policy with respect to presence and the problem of reduced access to overseas bases. The general conclusion of this chapter is that since World War II, access to overseas bases has declined and has adversely affected the manner in which US forces conduct presence operations. One proposed solution to this problem is the MOB.

Chapter III briefly outlines some possible MOB missions as perceived by some proponents of this project. Chapter IV

is the central core of research of this thesis. The legal analysis starts with the United Nations Law of the Sea Convention (UNCLOS) that entered force December 16, 1994. The main points of this section are to explain the UNCLOS demarcation regime and to determine the definitions of artificial islands, installations and structures under UNCLOS. Gaps in UNCLOS definitions and policy are explained by general concepts of international law and, where needed, municipal law.

The final Chapter outlines the dispute resolution system established by UNCLOS in a discussion to evaluate where the MOB may be legally anchored offshore, plus a final argument whether the MOB should be considered a ship or structure. The thesis concludes that the MOB should clearly be considered a ship under international law and, as such, should be able to anchor anywhere beyond the 12 nautical mile territorial sea of any country. Further, the thesis argues the MOB should be given warship status by the United States government.

I. INTRODUCTION.

The demise of the Soviet Union has called into question the future uses and utility of the US military. Does the Nation still need the large forces that were built during the Cold War? Many believe the answer is no, the military should be reduced. The next critical question is, what should the military look like in the post-Cold war era? Alternatives range from smaller force structure similar to the existing one, to a radically revised and "restructured" force structure that takes advantage of technology associated with the current revolution in military affairs. In truth, many of these and related questions were being asked before the fall of the of the Soviet Union, notably as part of the work of the Commission on Integrated Long-Term Strategy (the Weinberger Commission).¹

Although still primarily concerned with the Soviet threat, the Commission envisioned a substantially altered future US security environment. The Report proposed, among other things, that "China, perhaps Japan and other countries" will become military powers with their increasing economies and populations. It went on to caution that lesser countries will obtain advanced weaponry, that major US interests will be threatened "at fronts much closer

¹The Commission on Integrated Long-Term Strategy, *Discriminate Deterrence*, (Washington, D.C.: U.S. Government Printing Office [U.S. GPO], 1988).

to our adversaries than the US," and that military technology will "change substantially in the next 20 years."² One of the six factors the Commission claimed would alter the future security environment was the deteriorating US access to overseas areas. It said,

The United States must develop alternatives to overseas bases[,]...especially against possible Soviet aggression...But we should not ordinarily be dependent on bases in defending our interests in the Third World. We have found it increasingly difficult, and politically costly, to maintain bases there.³

The report enumerated other areas of the world where, regardless of the Soviet menace, a US military presence was required to protect national and allied interests. One significant aspect of the overall long-term strategy advocated by the Commission cited the need for, "[v]ersatile, mobile forces, minimally dependent on overseas bases, that can deliver precisely controlled strikes against distant military targets."⁴

Apart from the formal policy documents and political consensus strategies, the realities of the post Cold-War situation is that US military access, whether access only or actual physical presence, is declining. Additionally, in light of terrorist acts and host nation political or cultural sensitivities, the prospect of future reduction in

²Ibid, p. 1.

³Ibid, p. 22.

⁴Ibid, p. 3.

access is highly likely.⁵ A significant motivation for the Weinberger Commission was the 1983 bombing of the Marine barracks in Beirut, Lebanon. In 1988, the United States was asked to remove some, although not all, of its bases in Spain, Pakistan, and Thailand.⁶ In the wake of the recent terrorist bombing in Dharam, Saudi Arabia, the United States is reconsidering the extent of its forward deployed forces in the Middle East.⁷ The recent trend has been towards limiting or reducing access to overseas bases and not continuing or increasing that access.

This thesis examines the problem of declining US overseas access and forward presence issues by exploring the international legal ramifications of one proposed solution: the Mobile Offshore Base (MOB) concept. These ramifications depend, in part, on the legal definition of the proposed system. This thesis attempts to answer the question whether the MOB should be considered a warship, a merchant ship, or a structure.

A. BRIEF MOB DESCRIPTION.

The MOB's principal proponent, the former Vice-Chairman of the Joint Chiefs of Staff (VCJCS) Admiral William Owens (ret.), has described the system as taking advantage of "the

⁵William R. Doerner, "Growing Troubles for US Bases; High Costs and Inhospitable Hosts hamper Installations Abroad," *Time*, February 1, 1988, p. 33.

⁶Ibid.

⁷Christopher Dickey, "Target America," *Newsweek*, July 8, 1996, pp.22-26. see also Jason Glashow, "US Debates Arms Prepositioning in UAE," *Defense News*, June 19, 1995, p. 18, for an explanation of Middle East requirements versus war-fighting capabilities in the theater.

experience and technology associated with offshore oil-drilling platforms" by connecting two to six floating modules together to form a floating "island."⁸ Each module would be approximately 500 feet long, 300 feet wide, and 200 feet high.⁹ The MOB may be thought of as the afloat equivalent of Washington D.C.'s National Airport. According to a proposal by Brown & Root, a MOB would consist of two to six modules with vertical support columns 500 feet long, 312 feet wide, and 213 feet from keel to flight deck.¹⁰ Each module would have 450,000 square feet of below decks storage space.¹¹ The system would be anchored and kept in constant geo-position with thruster units with the ability to detach each module and maneuver slowly (under 8 knots), if necessary.¹² An alternative proposal from the Norwegian firm of Kvaerner-Moss involves what is essentially an oil platform "7,750 feet long with a 425 foot wide platform capable of supporting C-17 operations."¹³

The central purpose of the MOB scheme is to provide for a US overseas power projection capability without the potentially entangling encumbrance of a land base on foreign

⁸ADMIRAL William A. Owens, *High Seas: The Naval Passage to an Uncharted World*, (Annapolis: Naval Institute Press, 1995) p. 10 (hereinafter Owens, *High Seas*). See also Robert Holzer, "'Floating Island' Concept Gains Support in U.S. Military," *Defense News* April 18-24, 1994.

⁹*Defense News*. See Appendix 1 for Brown & Root Mobile Offshore Bases information sheet and pictures.

¹⁰Vice Chairman, Joint Chiefs of Staff ADMIRAL W.A. Owens letter to President, National Defense University, Ser CM-466-94, 22 September 1994, Enclosure 2.

¹¹Logistics Management Institute, *Concept of Operations: Mobile Offshore Base (MOB) for the United States Central Command (CENTCOM)*, 14 February 1995, p. 2.

¹²*Ibid*, p. 3.

¹³Logistics Management Institute, *Concept of Operation: Mobile Offshore Base (MOB) for the United States Atlantic Command (USACOM)*, 14 February 1995, p. 3.

territory. The system's advocates propose that the MOB modules would travel to an uncontested area of the ocean and be assembled to provide logistics, command and control, and a forward presence capability to the theater commander. On-station arrival times would be computed based on a nominal 6-10 knot speed of advance for each module. On-station assembly and commencement of operations times would vary with mission and location, but the fastest expectation would be four days to begin operations once the MOB was on-station.

The question of what would the MOB replace - bases or aircraft carriers - has been answered by the recent issuance of a Mission Needs Statement (MNS) calling for a large sea-based structure to replace land bases.¹⁴ For the purposes of this thesis, the MOB will be discussed in very general terms. The objective is to arrive at a legal assessment that can support either manifestation of the MOB, i.e., as a war fighting platform, or, as a logistics hub. In other words, this thesis addresses the question whether the MOB should be treated as a warship, a merchant vessel, or a structure. The answer is important because the legal status

¹⁴ "US Navy Asks for Offshore Base Concepts," *Jane's Defence Weekly*, April 24, 1996, p. 4. For a discussion of the issues See, Michael R. Gordon, "Admiral With High-Tech Dreams Has Pentagon at War With Itself," *New York Times*, 12 December 1994, p. 1, Admiral Stanley R. Arthur, Vice Chief of Naval Operations rejected the MOB concept because it was a "poor substitute for an aircraft carrier because of its limited mobility." See also Robert Holzer, "'Floating Island' Concept Gains Support in the US Military," *Defense News*, April 18, 1994, p. 10, quoting Scott Truver of Technomatics Inc, that the MOB is "not an aircraft carrier. It is an alternative to land bases in such places as Subic Bay and Diego Garcia."

of the MOB defines where it can be placed in the ocean.

Chapter I introduces and defines the issue. Chapter II discusses the background regarding the forward presence and overseas basing issues of future force requirements. Chapter III opens a brief discussion of possible MOB missions. Chapter IV explores international and admiralty law to determine the most advantageous legal position for the United States Government regarding the legal character of the MOB. The spectrum of international rights and responsibilities ranges from a warship that has extremely broad immunities from interference to a structure that is tightly controlled by the coastal state with the fluid position of merchant ships falling somewhere between the two. Chapter V presents arguments for and against placement of the MOB, and concludes by proposing the United States government should adopt the position that the MOB should be considered a warship for international law purposes.

II. FORWARD PRESENCE AND OVERSEAS BASING BACKGROUND ISSUES.

This chapter outlines US presence policy and the development of the MOB concept.

A. CURRENT POLICY.

The Clinton administration issued its current statement on national security policy in July 1996.¹⁵ It proposes three pillars of US *National Security Strategy*: (1) enhance national security, (2) promote prosperity at home, and (3) promote prosperity abroad. In support of the first pillar, the document states the United States will maintain a strong defense capability. In order to maintain this defense capability, the military is asked to accomplish major five tasks: (1) deal with major regional contingencies (MRCs), (2) provide a credible overseas presence, (3) counter weapons of mass destruction (WMDs), (4) aid multilateral peace operations, and (5) support other selected national security objectives.¹⁶ The MOB concept primarily concerns the second task of providing a credible overseas presence. However, it can be used to support other aspects of the policy as well. In an era of declining overseas access and dwindling political will to permanently station forces overseas, planners are forced to explore alternative ways to

¹⁵A *National Strategy of Engagement and Enlargement*, (Washington, D.C.: U.S. Government Printing Office [U.S. GPO], February 1996).

¹⁶*Ibid*, p. 13.

execute the *National Security Strategy*. The MOB is one option under consideration.

The National Military Strategy of the United States highlights forward presence as a foundation of US policy. It claims: "the day-to-day presence of US forces in regions vital to US national interests has been key to averting crises and preventing war."¹⁷ Strategic agility and power projection are critical to the presence mission.

Additionally, *The Bottom-Up Review's* conclusions are descriptive regarding the need for US overseas presence.¹⁸ The document's general conclusion is that the United States will continue to deploy forces overseas in order to, "protect and advance our interests and perform a wide range of functions that contribute to our security."¹⁹ For example, in South Korea, the United States will continue to deploy troops and pre-position equipment as, "long as its people want and need us there."²⁰ In Southwest Asia the problem is different. Here, "local sensitivities" to Europe or South Korea-like troop deployments prevent routine stationing of forces. In Southwest Asia the US military relies on periodic deployments of naval forces to maintain a presence.

¹⁷*The National Military Strategy of the United States*, (Washington, D.C.: U.S. Government Printing Office [U.S. GPO], January 1992), p. 7.

¹⁸ Secretary of the Navy Les Aspin, *Report on the Bottom Up Review*, (Washington, D.C: October 1993).

¹⁹*Ibid*, p. 14, See also James A. Lasswell, COL, USMC, *Presence - Do We Stay Or Do We Go? Joint Forces Quarterly* (Summer 1995) p. 84 (hereinafter Lasswell, *Stay or Go?*).

²⁰*Ibid*.

A seminal defense planning exercise, that still affects post-Soviet U.S. defense planning, was the work of the Weinberger Commission. In 1988, the Weinberger Commission was formed to review US military strategy for the next 20 years, "to guide force deployment, weapons procurement, and arms negotiations."²¹ The Commission's conclusions are used as an outline to discuss presence issues; they are supported by updated sources where available.

The Commission recognized the United States must preserve the ability to project power beyond our shores and maintain an overseas presence. It stated:

The United States has critical interests in the continuing autonomy of some allies very distant to us- in Europe and the Mediterranean, in the Middle East and Southwest Asia, in East Asia and the Pacific, and in the Western Hemisphere. We use bases, ports, and air space in helping these allies defend themselves and one another.²²

B. CONDUCT OF PRESENCE.

Presence is not a new issue. In addition to addressing future military strategy, the report of the Weinberger Commission is an excellent source document for understanding how the United States has practiced presence. The report noted how a key component of US military strategy had been the "forward deployment of American forces."²³ Forward

²¹*Discriminate Deterrence*, p. 1.

²²*Ibid*, p. 63; See Lasswell, *Stay Or Go?* pp. 83-85, for an excellent discussion of overseas presence to support the National Security Strategy to maintain a liberal free world economy.

²³*Ibid*, p. 5.

deployment or presence, has historically been heavily dependent on the availability of overseas bases on foreign territory.²⁴ Although the Commission's findings were couched in Cold War rhetoric, they recognized that the availability to United States forces of overseas staging areas for power projection served purposes other than countering the Soviet military menace alone. The report stated:

The United States will continue to need bases because the need will remain to deter or defeat aggressors at distant points overseas - typically at distant points much closer to our adversaries than to us.²⁵

In the past, the United States exercised presence by forward deployment of troops and material to bases on foreign soil. The general policy has been to fight wars beyond the territorial borders of the United States. One obstacle to continuing this policy is declining access to foreign bases.

C. DECLINING ACCESS TO FOREIGN BASES.

Since "[n]early all the armed conflicts of the past 40 years have occurred in what is vaguely referred to as the

²⁴Robert E. Harkavy, *Bases Abroad: The Global Foreign Military Presence*, (New York: Oxford University Press, 1989) pp. 2-4, citing Thucydides, Admirals Mahan and Gorshkov and W.W.II "lessons learned;" See also David S. Yost, *The Future of U.S. Overseas Presence*, *Joint Forces Quarterly* (Summer 1995) p. 70 (hereinafter Yost, *Overseas Presence*).

²⁵*Ibid.* A particularly illuminating pictorial representation of this problem is on pp. 24-25 of *Discriminate Deterrence*. In the 1950's, the Soviet had virtually no airfield and overflight capability to project power to the Persian Gulf and the U.S. had almost unlimited access. The U.S. logistics shipping distance was 990 NM while the Soviets needed to move supplies over 13,000 NM. By 1987 the U.S. was seriously limited in access to bases and overflight rights moving supplies 6540 NM while the Soviets shortened their distance to 725 NM.

Third World,"²⁶ the Weinberger Commission emphasized this area as the locus of a integrated long-term strategy. The Commission found that, "[o]ne long term trend unfavorable to the United States concerns our diminishing ability to gain agreement for timely access, including bases and overflight rights, to areas threatened by Soviet aggression."²⁷ The Regional Conflict Working Group of the Weinberger Commission predicted that "Presidents in the first decade of the next century may have to [act with military force] without many of the overseas bases that have underwritten the strategy of the United States in the Third World for most of the 20th Century."²⁸ The Future Security Environment Working Group predicted two serious consequences if access to overseas bases were to be lost.²⁹ First, the loss of access would result in the need for more expensive weapon systems, for example, a greater number of more expensive satellites. Next, the absence of bases would probably force a restructuring of US armed forces to "seize and hold forward bases from the enemy or other powers in the event of war."³⁰

The Commission recommended that, given the

²⁶The Commission on Integrated Long-Term Strategy, Regional Conflict Working Group, *Supporting U.S. Strategy for the Third World Conflict*, (Washington, D.C.: U.S. Government Printing Office [U.S. GPO], June 1988, p. 1 (hereinafter *Third World Conflict*)).

²⁷*Discriminate Deterrence*, p. 10; See also, George Galdorisi, CAPT, USN, *The United Nations Convention on the Law of the Sea: A National Security Perspective*, 89 *American Journal of International Law* 208 (1995) p. 209.

²⁸*Third World Conflict*, p. 13.

²⁹The Commission on Integrated Long-Term Strategy, Future Security Environment Working Group, *The Future Security Environment*, (Washington, D.C.: U.S. Government Printing Office [U.S. GPO], October 1988), pp. 59-60.

³⁰*Ibid.*

vulnerabilities of future foreign basing rights, "[t]he United States must develop alternatives to overseas bases."³¹ Over the years, various technical solutions have been suggested.

D. TECHNICAL SOLUTIONS.

In May 1988, The BDM Corporation issued a study prepared for the Defense Advanced Research Projects Agency (DARPA), entitled *Technological Alternatives to Bases Overseas (TABO)*.³² BDM was tasked to review various technological alternatives and provide a prioritized list of suggested actions for DARPA.

Technological alternatives were outlined in six major categories: (1) *air platforms*, including aircraft, airships, cruise missiles, and unmanned aerial vehicles (UAVs); (2) *materials and structures*, including tents made from Kevlar and advanced insulating material; (3) *airfields at sea*, semi-submersible mobile operating base, mobile operational large island, offshore platforms, and integrated supership system; (4) *advanced shipping*, such as wing-in-ground effect (WIG) and surface effect ships (SES); (5) *force configuration*, e.g., containerize forces and adapt/tailor Task Organization and Elements (TO&E) for base availability

³¹Ibid, p. 22; See also Yost, *Overseas Presence*, pp. 70-82, "It might be desirable to increase investment in maritime prepositioning and to investigate the potential merits of dispersed "transitory," low-cost facilities as well as the sustainability of defenses for a smaller number of permanent bases." p. 78.

³²The BDM Corporation, *Technical Alternatives to Bases Overseas (TABO)*, Prepared for the Defense Advanced Research Projects Agency, May 1988.

and mission; (6) C3I, integrate existing and future C3I systems to reduce the need for overseas presence by enhanced surveillance.

The TABO report found that the Nation's present sea and airlift capacity was woefully inadequate, but that, "users assume lift will be there." Significant deficiencies in lift capacity were noted in terms of the strength of power projection (measured in number of troops or ships) and the distance of the power projection from the continental United States (CONUS). The strength of power projection sharply decreased in direct relation to the distance from CONUS. The further away from CONUS the military was attempting to send forces significantly decreased the strength of the power projection. In addition, most Third World ports were thought inadequate for military use.

The TABO report recommended the first priority for DARPA consideration be the exploitation of airfield at sea technologies. A two pronged research strategy was recommended. First, DARPA was urged to compare the floating platform concept versus the "island" of very large ships. Simply, the MOB concept in its seminal stage was a series of floating, oil-drilling platforms bolted together, whereas, the other option was a very large crude carrying (VLCC) ship that can anchor or moor near geo-political hot spots to provide fuel and communications capability. The TABO report next urged that the CinCs assess strategic mobility trade-

offs.

Since the publication of the TABO report, DARPA has acquired technical information comparing floating platforms and islands of very large ships. Also, the Joint Requirements Oversight Council (JROC) has reviewed the technical and planning data. Early in 1996, the JROC issued the MNS for the MOB. The next step in the research strategy proposed by TABO is to assess proposals within the technical parameters outlined in the MNS.

III. MOB MISSIONS.

This chapter outlines the possible missions and characteristics of a MOB. Although the MOB concept has generated much interest, very little substantive commentary can be found in the open press. There are two possible reasons for this situation. First, the concept has only very recently been articulated by the recently retired VCJCS. Given his stature, critics may have been reluctant to voice their opinions. Second, since the concept remains under discussion at the JROC, most writers, specifically military people, are waiting some clearer definition of the MOB before commenting.

The two defining documents are Admiral Owens's book, *High Seas*, and a study commissioned by the JCS written by the Logistics Management Institute.

A. *HIGH SEAS*.

In his book, *High Seas*, Admiral Owens offers a vision of the types of systems the next generation military should acquire. Critical to understanding the problem of planning for 20-25 years in the future and the MOB is understanding Owens's theory of planning for 2021. The forces for the year 2021 he announced, "could differ greatly from what we see today."³³ With respect to the Navy, he urged the service had two options: first, it could "look at the kinds

³³*High Seas*, p. 161.

of ships, aircraft, and major weapons systems that are on the drawing boards today." Alternatively, it could "extend today's ideas and trends to their logical conclusion."

Owens dismissed the first approach as too "rooted in the perspectives and concerns of the past." He claimed the systems being planned today are reflections of Cold War perceptions, and not based on a discerning vision of future military actions. The solution, Owens concluded, was to extend today's "ideas and innovations to their logical future conclusions."

The problem with trying to use trends and ideas to predict the future is the difficulty of trying to decide what will evolve and what will become extinct. Owens states that if we can come close to the trends and ideas that will survive, we can ascertain a long-term planning approach that will produce better results than merely trying to re-win the Cold War. The essence of Owens's argument is that we should look to the future and try to design systems that respond to a future threat instead of trying to keep fighting the Cold War for the next 20 years. Stated differently, Owens believes we need to guess better about the future.

Owens's vision of future naval systems is tied to two major naval force functions: presence and war-fighting. Naval presence, he says, should be the job of today's large nuclear carriers and big deck amphibious ships. These ships would carry weapons and forces tailored to respond to a

particular threat or geographic area rather than carrying a standard complement of weapons and forces.³⁴ These ships would be the first on the scene to respond to a specific contingency. Examples could include a Non-combatant Evacuation Operation (NEO) of a US embassy, hostage rescue, or pirate seizure operations. These are examples of what the military today calls contingency operations.

By contrast, war-fighting would be the job of platforms that "might be capable of supporting operations of three to five hundred advanced tactical aircraft [per day] as well as large transports and vertical lift aircraft." The war-fighting platform would be deployed only in times of imminent hostilities, and when a long-term presence is required. The MOB is a case in point. Its purpose, Owens reports, is to "have an island wherever we wanted one," and have a flexible platform to be able to respond to a wide spectrum of potential conflicts. While Owens distinguishes between presence and war-fighting platforms, in actuality the two functions overlap considerably. Wars can be fought from "presence" ships and an MOB could be a strong and highly visible statement of US intention to maintain a presence in an area.

The seagoing capacity of an MOB, as envisaged by the VCJCS, would be larger than anything considered heretofore.

³⁴Ibid.

Notionally, it would displace greater than 500,000 tons (ktons) and operate more than 300 aircraft, presumably per day, from all services. Seagoing speed of advance would be slow, perhaps 6 knots. Alternatively, it might be assembled in-theater from modular components. The pre-eminent advantage of this concept over "conventional" carriers would be its unlimited on-station time and, it is claimed, a superior sea-keeping capability.

Owens outlined his vision of an MOB in very general, functional terms. The overall requirements are unlimited on-station time, logistic, maintenance, and tactical support of 300-500 tactical and support aircraft, and cost-effectiveness in comparison to life-cycle and manning costs of today's aircraft carriers.

B. LOGISTICS MANAGEMENT INSTITUTE CONCEPT OF OPERATIONS.

In 1994, the Joint Staff commissioned the Logistics Management Institute (LMI) of McLean, VA to produce a Concept of Operations for an MOB. The study was submitted to the Joint Staff in February 1995.³⁵ In general, LMI report expands upon Admiral Owens' concept; *High Seas* outlines the general characteristics of the MOB and the LMI study defines and refines what the MOB should be able to do. This thesis does not attempt to evaluate or analyze the

³⁵Logistics Management Institute, *General Concept of Operation for the Mobile Offshore Base (MOB)*, 16 December 1994. Concepts for all five regional Commanders-in-Chief (CinCs) and four functional CinCs were also produced and delivered to the Joint Staff in February 1995.

relevance of these mission areas. It is, nevertheless, necessary to generally understand the system's proposed mission areas so as to formulate the most appropriate legal position.

LMI's MOB concept is based on a building block (or LEGO) approach whereby "functional capabilities placed on each [MOB] will maximize use of containerization and modularized packaging."³⁶ The idea is to prepare for future technologies by designing a platform that can be quickly adapted to new command, control, communications, cryptology, and intelligence (C4I) capabilities. The notional minimum force configuration of any MOB will contain an "advanced [C4I] mechanism", nation-building capability in the form of a US Army Civil Affairs Detachment, and enough equipment for any assigned US Army unit to respond to a hostile battalion-sized force.³⁷

According to the LMI study, an MOB can be 'built' for any regionally specific role and be a staging area for six mission areas: force projection, forward operating base, logistics support base, deep attack and strike, nation building, and humanitarian support. Half of the mission areas (logistics hub, nation building, and humanitarian support) concern the presence function of the MOB, while the other three connect the presence attributes of the MOB with

³⁶General Concept of Operations, p. 1.

³⁷Ibid.

a war-fighting capability. It is not necessary to go into greater detail about MOB mission areas for the purposes of this thesis. The intended and actual uses are the significant factors for legal consideration, not whether the MOB can support Army Civil Affairs Detachments or land C-17s.

The legal character of the MOB could have significant repercussions as to the rights and responses available to a theater CinC. In all mission areas, the proposed scenario is a low-level Operation Other than War (OOTW) that expands to become a Major Regional Conflict (MRC). The United Nations Convention on the Law of the Sea outlines the ocean control regime of the future and influences how the US forces should plan around and employ the MOB. The next section explores the manner in which international and admiralty law affects such tactical decisions as whether to subtract some mission areas in order to preserve some more desirable capability. For example, increasing the system's medical facilities or nation-building capability at the cost of reducing the number of power projection aircraft. This decision could be made to ensure a more advantageous position within a territorial sea of a friendly coastal nation or defer an UNCLOS dispute resolution procedure initiated by a hostile coastal nation. The central issue is whether the MOB should be considered a ship, artificial island, or installation.

IV. LEGAL ANALYSIS.

The preceding discussion reviewed the origin of the MOB concept and how some military envisage using the MOB. This chapter examines international law in an effort to determine where the MOB can be legally placed. It also reviews the potential uses of the MOB so as to more clearly examine the most appropriate legal position. The discussion initially covers the US position regarding the 1983 United Nations Convention on the Law of the Sea. It is followed by a detailed explanation of the Convention's Sea Demarcation Regime. The bulk of the legal analysis covers the definitional problems between what is clearly stated in the Convention, what is omitted (whether intentionally or unintentionally), what can be gleaned from customary international law, and any helpful information from US admiralty law.

The 1983 United Nations Convention on the Law of the Sea (UNCLOS) is an unprecedented document in international law and relations. For the first time, there is a single document that endeavors to outline all nations' rights and responsibilities regarding the use of the sea. The entire previous 600 years of customary international law was considered and standardized in a single doctrine applicable to all signatory nations. Any analysis of contemplated actions that have law of the sea implications must start

with a thorough explanation of the applicable sections of UNCLOS. Any gaps within the UNCLOS framework should be filled in by customary law as defined by state practice and general principles of international law. Where there are no general rules of international law, US municipal law is used to assist the analysis.

On November 16, 1994, UNCLOS entered into force over the US and major industrial nations' refusal to sign it in the 1980's.³⁸ The United States is presently in the process of acceding to the Treaty.³⁹ This chapter outlines the major sections of UNCLOS, customary international law, and illustrative US domestic law that could possibly affect placement of the MOB.

A. THE US POSITION ON THE LAW OF THE SEA.

On July 9, 1982 President Reagan announced his decision not to sign UNCLOS.⁴⁰ The reservation concerned Part XI, the deep seabed mining section.⁴¹ The US position was that Part XI was flawed because it did not give the United States a voice commensurate with its interest; that it would deter private investment; that it would compel the United States to transfer technology, and would limit seabed resource

³⁸Statement of Hon. David Colson, Deputy Assistant Secretary for Oceans, Department of State, before the Committee on Foreign Relations (Washington, DC, August 11, 1994) (hereinafter August 1994 Hearings), p. 12.

³⁹LT T. Tierney, Department of the Navy, Office of the Judge Advocate General, 06 November 1995. The Treaty is presently in Congressional Committee awaiting advice and consent.

⁴⁰Luke T. Lee, "The Law of the Sea Convention and Third States," 77 *American Journal of International Law* 541 (1984) citing Statement by the President, released by the Department of State on July, 9, 1982, 18 Weekly Comp. Pres. Doc. 887 (12 July 1982).

⁴¹August 1994 Hearings, pp. 8-9.

production in an unacceptable manner.⁴² Since then, the US position has consistently been to abide by all non-seabed provisions of the Treaty without signing it.⁴³

On July 28, 1994, the United Nations adopted, and the United States signed, the Agreement Relating to the Implementation of Part XI of the 1982 United Nations Convention on the Law of the Sea of December 10, 1982. This Agreement reforms the deep seabed mining aspects of Part XI of UNCLOS to correct past US objections.⁴⁴ UNCLOS went into effect November 16, 1994, and the provisions of the 1994 agreement should go into effect upon proper ratification.⁴⁵ The major effect of US ratification of Part XI is to formally include the United States in the UNCLOS regime. United States ratification will indicate acceptance of the terms of the Treaty by accession. During hearings before the Senate Committee on Foreign Relations in the summer of 1994, representatives from the Joints Chiefs of Staff, State Department, National Oceanic and Atmospheric Administration, Department of Defense Office of International Affairs and Intelligence, and the US Coast Guard unanimously advocated adoption of UNCLOS as modified by the 1994 Agreement.⁴⁶

In sum, the United States agreed to abide by all the terms of UNCLOS except the mining Section XI in 1982 and is

⁴²Ibid, p. 13.

⁴³Ibid, p. 16.

⁴⁴Ibid, p. 12.

⁴⁵Ibid, p. 1.

⁴⁶Ibid.

in the process of acceding to the UNCLOS regime in 1996. After determining the appropriate treaty to be considered (UNCLOS), it is important to understand what UNCLOS covers.

B. THE UNCLOS SEA DEMARCATION REGIME.

Prior to any in-depth analysis of any UNCLOS or admiralty issues, it is critical to define the existing legal divisions of the oceans.

1. Baseline Determination.

The first issue is how to determine where land ends and sea begins, or how to start measuring the territorial sea. Articles 3 - 16 provide some guidance for determining baselines, but this issue is very sensitive and fact-specific. Each baseline must be computed on a case-by-case basis due to historic bays, mouths of rivers, and numerous other methods and exceptions that determine a state's baseline for territorial sea determination.⁴⁷ All the rules and minute permutations regarding baseline determination are beyond the scope of this thesis. The general rule embodied in UNCLOS is to measure from the low water mark.⁴⁸

2. The Territorial Sea.

Article 2 of UNCLOS defines the territorial sea of a nation as 12 nautical miles (NM) from the baseline. In this

⁴⁷United States Department of State, Bureau of Oceans and International Environmental and Scientific Affairs, *Limits in the Seas: No. 112: United States Responses to Excessive National Maritime Claims*, (Washington DC: Department of State, March 9, 1992).

⁴⁸See generally, *The Fisheries Case (UK v. Norway)* 1951 I.C.J. 116. For a detailed explanation of how to determine the low-water mark, see Boggs, "Delimitation of Seaward Areas Under National Jurisdiction," 45 *American Journal of International Law* 240 (1951).

area a nation may exercise, "the same sovereignty...as it has with respect to its land territory."⁴⁹ The sole exception to this rule is the right of innocent passage as defined below in Section C, 3.

3. The Contiguous Zone.

The contiguous zone is 24 NM from the baseline wherein a nation may exercise control to prevent violation of customs, fiscal, immigration, or sanitary laws within its territory or territorial sea.⁵⁰

4. The Exclusive Economic Zone (EEZ).

The EEZ is a development of the latter half of the 20th century. Prior to the development of the EEZ, all waters seaward of the contiguous zone were considered high seas.⁵¹ Articles 55-75 of UNCLOS establish a 200 NM zone in which a coastal state has not only sovereign rights for exploring, exploiting, conserving, and managing all the living resources therein, but also such rights with respect to the non-living resources of the seabed. These seabed rights include the subsoil and superadjacent waters and other activities undertaken for the economic exploitation and exploration of the zone, to include production of energy from the water, currents, and winds.⁵² Additionally the

⁴⁹United Nations Convention on the Law of the Sea, entered into force, Nov. 16, 1994, UN Doc. A/CONF.62/122 (1982) (hereinafter UNCLOS), Article 2. See also Gerhard von Glahn, *Law Among Nations: An Introduction to Public International Law*, 5th ed. (New York: Macmillian, 1986), pp. 356-359.

⁵⁰UNCLOS, Arts. 33(1) and 33(2). See also von Glahn, p. 379.

⁵¹2 Hackworth, *Digest of International Law* 651 (1941).

⁵²UNCLOS, Art. 56.

coastal state has some limited jurisdiction over the establishment and use of artificial islands, installations and structures, marine scientific research, and the protection and preservation of the marine environment.⁵³

Granting a coastal state the rights stated in the previous paragraph does not imply a widespread grant of authority over the EEZ. Restraints on the exercise of coastal state jurisdiction in the EEZ exist. For example, Articles 58(1)-(2) provide that all nations may exercise the high seas freedom of navigation and overflight to include laying submarine cables and pipelines. Articles 56(2) and 58(3) create reciprocal duties for coastal states and states exercising rights in the EEZ to give "due regard" to "lawful" coastal state laws and reasonable performance of international rights.

5. The Continental Shelf.

Article 76 of UNCLOS outlines the relevant definition of what is considered a coastal nation's continental shelf. Without descending into the argument as to what is the shelf, the important issue is the rights nations have over the shelf and where these rights begin and end. Realizing the difficulty of determining the limits of the continental shelf, the treaty negotiators established a commission to make "final and binding" determinations regarding coastal

⁵³UNCLOS, Arts 56 (1) (b) and 60.

nation shelf claims.⁵⁴ Broadly speaking, the rights over the continental shelf and EEZ are similar.⁵⁵ The pertinent issue for most nations is whether their respective shelves extend beyond the 200 NM EEZ. If a coastal nation determines its shelf is beyond the 200 NM EEZ, the nation can exert jurisdiction to the limits of the shelf.⁵⁶ But in no case may a nation exert rights beyond 350 NM from the measuring baseline.⁵⁷

In summary, all nations may exercise EEZ rights in an area up to 200 NM from the measuring baseline. Additionally, a coastal nation may exercise EEZ rights to the limits of the continental shelf but in no case beyond 350 NM from the baseline. The coastal nation retains the right to control all shelf exploitation, and no nation may undertake actions without the coastal nation's consent,⁵⁸ to include "drilling on the shelf for all purposes."⁵⁹ In contrast, the coastal nation may not "unjustifiably interfere" with the normal rights of the high seas.⁶⁰ Article 60, regarding artificial islands, structures and installations in the EEZ, is applied *mutatis mutandis* to the continental shelf.

6. The High Seas.

⁵⁴UNCLOS, Art 76(8) and Annex II.

⁵⁵UNCLOS, Art 77(1) and EEZ discussion above.

⁵⁶Louis B. Sohn and Kristen Gustafson, *The Law of the Sea*, (West: St. Paul, Minn., 1984) p. 158.

⁵⁷UNCLOS, Art 76(6).

⁵⁸UNCLOS, Art 77(2).

⁵⁹UNCLOS, Art 81.

⁶⁰UNCLOS, Arts 78 and 87.

Article 86 defines the high seas as all water not in the internal waters, territorial seas, or EEZ of any nation, nor the archipelagic waters of an archipelagic state. All nations may exercise traditional freedoms of navigation, overflight, and submarine cable laying on the high seas.⁶¹ Additionally, nations may construct artificial islands, fish freely, and engage in scientific research subject to the limitations of the treaty.⁶² There is one intuitive limitation on the rights of a nation on the high seas. All nations must exercise "due regard" for interests of other states while on the high seas.⁶³ Article 88 reserves the high seas for "peaceful purposes" with no further definition of peaceful.

7. Synopsis.

a. Territorial Sea.

- (1) Baseline - 12 NM.
- (2) Coastal State exercises sovereign control.

b. Contiguous Zone.

- (1) Baseline - 24 NM.
- (2) Coastal State enforces customs, fiscal, immigration, and sanitary laws.

c. Exclusive Economic Zone.

- (1) Baseline - 200 NM.

⁶¹UNCLOS, Art 87.

⁶²Ibid.

⁶³UNCLOS, Art 87 (2).

(2) Coastal State has jurisdiction to reasonably:

(A) Explore, exploit, conserve, and manage living and non-living resources of the seabed and superjacent waters. Includes energy from water, currents, and winds.

(B) Establish "artificial islands, installations, and structures," conduct marine research, and marine environment protection.

d. Continental Shelf.

(1) Baseline - 2,500 meter Isobath plus 100 NM not to exceed baseline plus 350 NM.

(2) Coastal State has jurisdiction to:

(A) Explore and exploit the natural resources of the seabed but not the superjacent waters.

(B) Establish "artificial islands, installations, and structures," conduct marine research, and marine environment protection.

(C) Authorize and regulate drilling for whatever purpose.

e. High Seas.

(1) All waters not internal waters, Territorial Sea, or Exclusive Economic Zone.

(2) Coastal States have no jurisdiction, except in cases of piracy where a warship or military aircraft of any state may seize a pirate ship on the high seas, "or any

other place outside the jurisdiction of any state[.]”⁶⁴

C. DEFINITIONS.

The central definitional problem of this thesis is whether the MOB is a ship or something else. If it is a ship, is it a warship or merchant vessel. If it is not a ship, is it, therefore, an artificial island, an installation or a structure? The ship definition section begins with a customary international law discussion because UNCLOS is devoid of any attempt to define ships beyond customary law.

1. Ship.

a. Customary International Law Regarding Ships.

The customary law on the definition of a ship can be summed up as very easy to comprehend but extremely difficult to define. For the purposes of this thesis, “the word ‘ship’ must be taken as including all types of ships whatever their size or purpose.”⁶⁵ This definition can be reduced to three factors distilled from international agreements and state municipal law: (1) means of propulsion, (2) ownership, and (3) navigability and navigation.⁶⁶ There are a number of questions a maritime judge could ask to further find whether an object is a ship. They are:

⁶⁴ UNCLOS Article 105. See generally Articles 100-107.

⁶⁵ Nilos Papadakis, *The International Legal Regime of Artificial Islands*, (Leyden: Sijthoff, 1977) pp. 96-99.

⁶⁶ Ibid, p. 99.

What is the design of the object?

What is the purpose for which it was built, its function, and actual use?

What is the means of propulsion?⁶⁷

Is there a rudder and what is the manning of the object?⁶⁸

What is the degree of stationariness and mobility of the object?

Will the object be subjected to ordinary maritime risk?⁶⁹

The conclusion to be drawn from these factors is that trying to define the legal status of ship must rest in a factual determination to be made on a case-by-case basis. A number of factors that could be used in determining the status of the MOB can be gleaned from US Admiralty law.

b. US Admiralty Law Regarding Ships.

The Jones Act⁷⁰ is the litigation vehicle that has caused the most controversy in US admiralty law regarding what a vessel is and what it is not. The Jones Act permits a worker injured on a vessel to seek federal judicial relief instead of relying on state based actions grounded on territorial jurisdiction. The legislation was a response to the situation in which ship workers and crew attached to ships were not eligible for state worker's compensation due to their status as not being employed in a state. The initial burden of proof is for the plaintiff to show he was

⁶⁷But a ship need not be able to navigate under her own power.

⁶⁸The absence of a rudder or a crew does not mean the object is not a ship.

⁶⁹Papadakis, pp. 100-101. Papadakis goes on to argue that floating airports are not ships in the strict sense, but nor are they islands, and it "would be inappropriate to treat these platforms...as ships." p. 102. He further admits there are very few restrictions on the scope of the legal definition of a ship reducing the confidence of his opinion that floating airports should not be considered ships. p. 103.

⁷⁰46 USC 688.

working on a vessel and not a platform. If the plaintiff can prove he was on a vessel, the claim may proceed in federal court. If not, the case is remanded to state court for adjudication. Before delving into the limits of definitions, the Fifth Circuit (in Louisiana) admonished that a vessel is "incapable of precise definition."⁷¹

The beginning of all vessel determinations is *The Robert W. Parson*⁷² wherein the Supreme Court stated the general rule that the purpose for which a craft was created governed vessel determination. In 1908, in *Phoenix Const. v. The Steamer Poughkeepsie*,⁷³ the Supreme Court clearly stated that drilling platforms were not within admiralty jurisdiction. These two cases establish the limits of the decision spectrum. At one end of the spectrum is a free floating vessel intended to travel over the ocean, and at the other end is the platform solidly attached to the ocean floor with no design or intent to periodically move.

There are several statutory definitions, but the root of all US ship determinations begins with 1 USC 3 that defines a vessel as "every description of watercraft or other artificial contrivance used, or capable of use, as a means of transportation on water."⁷⁴ The only significant derivation from this definition in US law is 33 USC 1601,

⁷¹*Ducote v Keeler & Co.*, 953 F.2d 1000, (5th Cir. 1992).

⁷²191 US 17, 24 S Ct 8, 48 L Ed 73 (1903).

⁷³212 US 558, 28 S Ct 687, 53 L Ed 651.

⁷⁴1 USC 3. See 10 USC 101, 32 USC 101, 33 USC 902(21), 33 USC 1601, 37 USC 101, 46 USC 2101(45), and 46 App. Sec 1241o.

where the International Regulations to Prevent Collisions at Sea adds, "nondisplacement craft and seaplanes" to the definition of watercraft required to adhere to the "Rules of the Road."

US case law on this issue offers a wealth of defining information. A vessel should float and be equipped with self-propulsion or with the capability to be towed long distances.⁷⁵ A significant factor to consider when determining the purpose of craft construction and "permanence" is whether the craft is intended to move and the frequency of moves.⁷⁶ Presumably, the greater the frequency of moves of the craft, the easier it will be to conclude the craft is a vessel. But merely because a barge is not moved for a period of months does not "affect the conclusion that it was designed for transportation of goods over navigable waters."⁷⁷ In addition, a mobile structure that temporarily pierces the ocean floor with an anchoring device that can be retracted when the structure is moved "can be considered a vessel throughout."⁷⁸

A secondary consideration for vessel determination is whether the craft is equipped with the requisite day shapes, navigation lights, etc., required by the International Regulations for Prevention of Collisions at

⁷⁵*J.M.L. Trading Corp. v Marine Salvage Corp.*, 501 F.Supp. 323 (E.D. N.Y. 1980).

⁷⁶*Offshore Co. v Robison*, 266 F.2d 1215 (5th Cir. 1969).

⁷⁷*Brunet v Boh Bros Const.*, 715 F.2d 196 (1983).

⁷⁸*Hicks v Ocean Drilling and Explorations Co.*, 512 F.2d 817 (5th Cir 1975).

Sea (72 COLREGS). Complying with the 72 COLREGS for vessels goes to prove a craft is a vessel and not a platform.⁷⁹

Ships (or vessels), in municipal and international law, are simple to define in general, but difficult to define in specifics. The best way to think about how to define ships is to apply a type of "totality of circumstances" test. A ship need not display the traditional features of a ship (e.g., bow, stern, keel); nor does long-term anchoring alter the status of the ship. As long as the ship was constructed for the purpose of water travel and not permanently attached to the sea bed, the ship retains its status. Other factors and features can go to prove the nature of the ship, e.g., rudder, motive force, displacement, etc. Since the MOB will not be permanently anchored to the seabed and displays most of the attributes of a ship and not a platform, what will be the character of the MOB, warship or merchant vessel?

c. Warship or Merchant Vessel?

Historically, the issue of what constitutes a warship has not been contentious, but Article 29 of UNCLOS outlines a definition to distinguish a warship from a merchant ship. A warship is defined as a ship belonging to the armed forces of a state bearing external marks

⁷⁹See *Ducote* at n. 33. See also *Bernard v Binnings Const. Co.*, 741 F.2d 824, 832 at n. 25 (5th Cir 1984). For an excellent discussion regarding vessels and jurisdiction under US law, see, Jo Desha Lucas, 3rd ed., *Cases and Materials on Admiralty*, (New York: Foundation Press, 1987) pp. 126-135.

identifying its nationality, under the command of an officer duly commissioned by the government of the state and whose name appears in the appropriate service list or equivalent, and manned by a crew under regular armed forces discipline."⁸⁰ The reference to "armed forces" instead of "naval" recognizes that many nations do not distinguish between ships operated by armies, coast guards, or air forces.⁸¹

The Treaty does not directly address what constitutes a merchant ship, but by implication, state practice, and customary law definitions, a reasonable definition can be outlined. The general rule of merchant shipping is that it is privately owned, employed, and managed for profit.⁸² The historical difficulty of this definition has been that in time of war, commercial merchant ships are operated by governments for purposes other than profit, essentially for national security purposes.⁸³ A third complicating situation arises in peacetime with state-owned shipping companies. The difficult legal question is

⁸⁰UNCLOS Article 29 is reflected in 46 USC 2101(47) (a)-(d).

⁸¹Bernard H. Oxman, *The Regime of Warships Under the United Nations Convention on the Law of the Sea*, 24 *Virginia Journal of International Law* 809, (1984) p. 813 (hereinafter Oxman, *Regime*).

⁸²Charles D. Gibson, *Merchantman? or Ship of War?: A Synopsis of Laws; State Department Positions; and Practices Which Alter the Peaceful Character of U.S. Merchant Vessels in Time of War*, (Camden: Ensign Press, 1986) p. iv, definitions.

⁸³This point is the general thesis of Gibson, *Merchantman?*, and a vexing problem of pre-UNCLOS international law. Although von Glahn (p. 365) argues Government ships operated for non-commercial purposes have always been granted warship immunity, this is not a universally accepted interpretation. The entire premise of Gibson, *Merchantman?* and the Merchant Marine efforts to receive veteran status from W.W.II, support the conclusion this is a point where reasonable people differed before UNCLOS.

whether these companies are operated for profit or for national security reasons. UNCLOS effectively diminishes this difficulty by separating previous customary law definitions into "Merchant ships and Government ships operated for commercial and non-commercial purposes."⁸⁴ Merchant ships and government ships operated for commercial purposes are treated the same as merchant ships.⁸⁵ Government ships operated for non-commercial purposes are treated as warships with the same immunities on the high seas.⁸⁶

Therefore, if the MOB is a government ship operated for commercial purposes - a difficult argument to make in light of the military flavor of its cargo and crew - then it should be treated as a merchant ship. If, on the other hand, it is a government ship operated for non-commercial purposes, it will have all the immunities of a warship. The best apparent position is to ensure the MOB is considered a warship under Article 29 of the Treaty. The advantage of a clearly defined determination of warship status is evident upon examining the warship immunity.

d. Warship Immunity.

One of the most widely recognized precepts of international law concerns the immunity of warships from foreign interference on the high seas:

⁸⁴UNCLOS, Part II, Section 3, Subsections B and C.

⁸⁵UNCLOS, Arts. 27 and 28.

⁸⁶UNCLOS, Art. 96.

[W]arships represent the sovereignty and independence of their state more fully than anything else can represent it on the ocean; they can be met only by their equals there, and equals cannot exercise jurisdiction over equals. The jurisdiction of their own state is therefore exclusive under all circumstances and any act of interference with them on part of a foreign State is an act of war.⁸⁷

This rule is codified in UNCLOS Article 95. Although warships retain a broad range of freedoms on the oceans, these freedoms must be exercised "with due regard for the interests of other States in their exercise of freedom of the high seas."⁸⁸

Warships are excluded from the marine protection and preservation requirements of UNCLOS in Article 236. They are not considered significant sources of pollution and exercise of this type of jurisdiction would not be in the interest of the signatory states.⁸⁹ But, "it was not considered unrealistic to expect a high degree of self-imposed environmental diligence by major flag states."⁹⁰

Up to this point, it has been argued that the MOB should be treated as a sea-going ship, specifically that it should be considered a warship of the US government. In order to strengthen the legal argument for treating the MOB as a warship, it is useful to clarify what the MOB is not. Namely, the strongest and most reasonable claim a

⁸⁷Burdick H. Brittin, *International Law for Seagoing Officers*, 5th ed. (Annapolis: Naval Institute Press, 1986), p. 113 (citing Higgins, *International Law of the Sea*). See also Oxman, *Regime*, pp. 617-619.

⁸⁸Oxman, *Regime*, p. 827.

⁸⁹*Ibid*, pp. 820-821.

⁹⁰*Ibid*, p. 821.

coastal state can make regarding the MOB is that it is an artificial island, an installation, or a structure under the UNCLOS regime.

2. Artificial Islands, Installations and Structures.

a. UNCLOS.

Article 60 grants the coastal state the "exclusive right" to construct, authorize, and regulate the construction and operation of artificial islands in the EEZ and continental shelf.⁹¹ The coastal state may also regulate installations and structures within the EEZ for resource and other economic purposes plus scientific research.⁹² The intent of the article is to allow the coastal State to manage the resource exploitation and scientific research done within its EEZ.⁹³ The contentious issue concerns the exact definition of what constitutes an artificial island, structure, or installation. The Treaty text is devoid of guidelines for this determination.⁹⁴

The UNCLOS III *travaux preparatoires* is very limited in its discussion of the structure, artificial island, or installation determination. One reference from a 1972 definition working group meeting indicates

⁹¹John Woodliffe, *The Peacetime Use of Foreign Military Installations under International Law*, (Dordrecht: Martinus Nijhoff, 1992) p. 96.

⁹²Jon M. Van Dyke, *Consensus and Confrontation: The United States and the Law of the Sea Convention*, (Honolulu: University of Hawaii Press, 1984) pp. 158-159.

⁹³Clyde Sanger, *Ordering the Oceans: The Making of the Law of the Sea*, (London: Zed Books, 1986), pp. 130-131.

⁹⁴Satya V. Nandan and Shabtai Rosenne, eds., *United Nations Convention on the Law of the Sea 1982: A Commentary*, vol. II, (Dordrecht: Martinus Nijhoff, 1993) p. 584 (hereinafter Nandan and Rosenne).

"'artificial' should be inserted between 'offshore' and 'islands' [in order to provide] for the coastal state's exclusive right to authorize and regulate construction and operation of offshore artificial islands and other installations used for the exploration and exploitation of the non-renewable resources thereof."⁹⁵ One possible explanation for the lack of discussion during the UNCLOS III negotiations is that the 1958 Law of the Sea meeting issued the Convention on the Continental Shelf that addressed most of these questions and the issue was believed to be settled. The 1958 Convention on the Continental Shelf states that the coastal state is entitled to "construct and operate" installations and other devices "necessary for [Continental Shelf] exploration and the exploitation of its natural resources."⁹⁶ Coastal states were not allowed "to prohibit installations not designed for extractive purposes."⁹⁷ The intent was to prohibit states from making sovereignty claims over the high seas.⁹⁸

It is interesting to note a 1974 proposal by 18 African states that resurrected the previously rejected sovereignty issue. It stated:

No nation shall be entitled to construct, maintain, deploy, or operate, in the Exclusive Economic

⁹⁵Third United Nations Conference on the Law of the Sea (1973-74) Vol. 2, Official Records (United Nations: New York, 1975) 22nd meeting, 31 July 1974, p 172 (hereinafter *UNCLOS III 1973-74*).

⁹⁶Nandan and Rosenne, pp. 573-574.

⁹⁷Note, Jurisdictional Problems Created by Artificial Islands, 10 *San Diego Law Review* 638 (1973) p. 654 (hereinafter Note, Artificial Islands).

⁹⁸*Ibid.*

Zone of another state, any military installation or device or any other installations or devices for whatever purposes, without the consent of the Coastal State.⁹⁹

This proposal was not even included in working paper discussions. A 1976 Peruvian proposal would have had the same effect as the African proposal but did not elicit enough support to be accepted.¹⁰⁰

The previous points argue for the conclusion that if a structure is not erected for the purpose of non-renewable resource exploration or exploitation, it is not under the jurisdiction of the coastal state. The use of the resource exploration or exploitation terms in the yearly reports to the Secretary-General show a strong bias towards the specific economic aspects of the terms over the general, non-defined jurisdictional aspects.¹⁰¹ This economic bias was evident when by several maritime nations during the UNCLOS III negotiations "did not view as contrary to international law the construction of installations for military purposes by one state in the economic zone of another."¹⁰² It must be reemphasized that a nation may not build an artificial island in the EEZ or continental shelf of another without the coastal state's permission.¹⁰³ This

⁹⁹Ibid, p. 578.

¹⁰⁰Ibid, pp. 581 and 584-585.

¹⁰¹See, for e.g., The Netherlands Institute for the Law of the Sea, *International Organizations and the Law of the Sea: Documentary Yearbook 1987*, (Dordrecht: Martinus Nijhoff, 1987) p.20 citing Law of the Sea Report of the Secretary General, doc.no:A/42/688 pares 34-38 (hereinafter 1987 Yearbook).

¹⁰²Woodliffe, p. 95.

¹⁰³Ibid.

seems reasonable in light of the reason for the creation of the EEZ regime, namely, the control and coordination of living and non-living resource exploitation. From this analysis, it can be concluded that the placement of a MOB anywhere within the EEZ can only be objected to by reference to the Convention's provision's that bar interference with the exploration and exploitation of EEZ resources NOT under the Article 60 general grant of jurisdiction. Only Mexico has added any defining language to its enabling domestic legislation for UNCLOS.¹⁰⁴ Mexico reserves the right to control "immovable property" used for EEZ exploration and exploitation.¹⁰⁵

The United Nations has made a small in-road in defining the difference between installations and structures versus vessels. When a mobile drilling unit (MODU) is "in transit and not engaged in drilling operations" it is considered a vessel, but when it is engaged in drilling operations it is considered a structure or installation.¹⁰⁶ The nature of the attachment to the seabed appears to be the significant definitive factor for vessel versus structure or installation determination.¹⁰⁷

In the absence of clear treaty language to enable

¹⁰⁴Office of Legal Affairs, Division for Ocean Affairs and the Law of the Sea, United Nations, *The Law of the Sea: National Legislation on the Exclusive Economic Zone*, (New York: United Nations, 1993).

¹⁰⁵*Ibid*, p. 220.

¹⁰⁶United Nations General Assembly, Measures to Prevent Infringement of Safety Zones Around Offshore Installations or Structures, Adopted 4 January 1988, Doc.no:A25/Res.621, reprinted in *Yearbook 1987*, pp. 330-335.

¹⁰⁷Oxman, Regime, p. 843.

a positive decision regarding the vessel versus structure or installation status of the MOB, it is prudent to examine general principles of international law to clarify the issue.

b. Customary International Law.

This source of international law concerns the examination of the interaction of countries as evidenced by their state practice and official policies. As these practices become more widespread, they develop into law and eventually into treaties.

(1) **Artificial Islands.** The 1958 Convention on the Territorial Sea and the Contiguous Zone codified the customary law understanding of an artificial island by defining an island as "a naturally formed area of land, surrounded by water, which is above water at high tide."¹⁰⁸ The use of "naturally formed" gives rise to an issue of interpretation as to what is formed or created. If a spoil (river dredge refuse) bank is created near a naturally formed island, then it presumably becomes an 'artificially formed' island. It is a geographic island, but it would not fall within the legal regime for computing a baseline to measure the territorial sea.¹⁰⁹

Another definition states that an artificial island is

¹⁰⁸ Gary Knight and Hungdah Chiu, *The International Law of The Sea: Cases, Documents, and Readings*, (New York: Elsevier Applied Science, 1993), p. 63.
¹⁰⁹ See Generally, *Ibid*, pp.64-64.

a "non-naturally formed structure, permanently attached to the seabed, surrounded by water, which is above water at high tide."¹¹⁰ A third writer has added "steel, such as the common off-shore oil platform" to the material and definition of an artificial island.¹¹¹ In addition, deep water ports for fueling supertankers at sea should be considered artificial islands with no territorial sea.¹¹²

Analysis of the prefatory work for UNCLOS indicates there are structures that are not natural islands and therefore should be considered artificial islands. They include:

(1) Natural materials artificially placed on the seas, for instance, sand, stones, clay, or rocks dumped on the seas in the shallow waters, even though they show permanently above water at high tide...

(4) Navigational aids, such as lighthouses, lightships, beacons and buoys.

(5) Artificial structures, for example, installations erected on the sea-bed, drilling platforms and floating objects.

(6) Artificial structures erected on a pre-existing natural formation, for example, on shallow sand-banks or drying rocks, even though they are visible at high tide.¹¹³

(2) Installations. The problems surrounding defining installations have arisen recently after the discovery of offshore oil and how to exploit that resource. First, installations that do not serve "an economic purpose"

¹¹⁰ Papdakis, p. 6. See also Note, *Artificial Islands*, p. 638.

¹¹¹ Note, *Artificial Islands*, p. 638; see also Brittin, p. 90.

¹¹² D.P. O'Connell, *The International Law of the Sea*, Vol.2 (Clarendon: Oxford, 1984) pp.846-847.

¹¹³ Brittin, p. 96-97.

or do not interfere with the exercise of a coastal state's rights within the EEZ are not within the scope of Article 60.¹¹⁴ For a nation to assert jurisdiction over an installation within the EEZ, the installation must have an economic purpose or must interfere with the exercise of the coastal state's rights. After excluding non-economic installations, UNCLOS does not provide further guidance regarding the definition of an installation. Prior to UNCLOS, installations "refer[red] collectively to as man-made structures from such other materials as concrete and steel, for example, drilling platforms."¹¹⁵

One definitional development independent of UNCLOS has occurred in the offshore oil and gas drilling industry. For example, North Sea oil and gas exploitation treaties support the conclusion that, for the purpose of international law, an installation is a petroleum facility. One agreement states,

Offshore Facility means...any installation or portion thereof of any kind, fixed or mobile, used for the purpose of exploring for producing, treating, storing or transporting crude oil from the seabed or its subsoil[.]¹¹⁶

The Seabed Pollution Liability Convention similarly states,

...installation means (a) any well or other facility, whether fixed or mobile, which is used for the purpose of exploring for, producing, treating,

¹¹⁴ Nandan and Rosenne, P. 584.

¹¹⁵ Papadakis, p. 6.

¹¹⁶ David Freestone and Ton Ijlstra, eds., *The North Sea: Basic Legal Documents on Regional Environmental Co-operation*, (Dordrecht: Martinus Nijhoff, 1992), p. 320.

storing, control of the flow of crude transmitting or regaining control of the flow of crude from the seabed or its subsoil.¹¹⁷

Within the general understanding of the North Sea treaties, the common understanding of "installation" is that it is an offshore platform used for petroleum removal from the seabed.

A corollary to this issue is the concern with maritime safety around oil platforms. In the 1980s, the International Maritime Organization (IMO) began work on a regime to ensure the removal of unused installations and structures in the oceans.¹¹⁸ The overwhelming concern of the IMO in these negotiations has been with navigation safety and pollution prevention. The crux of the arrangement is to remove the oil platforms that dot the EEZ and continental shelf. This effort supports the contention that the UN and UNCLOS are primarily concerned with installations and structures with an economic or exploitative purpose.

(3) Structure. It can be safely argued "structures fixed on the seabed cannot in reason be considered ships."¹¹⁹ The Netherlands' government handling of the offshore R.E.M. broadcasting station is indicative of the distinction to be made between ships and structures.

¹¹⁷ Ibid, p. 345.

¹¹⁸The Netherlands Institute for the Law of the Sea, *International Organizations and the Law of the Sea: Documentary Yearbook 1988*, (Dordrecht: Martinus Nijhoff, 1988) p. 25 citing Law of the Sea Report of the Secretary General, doc.no:A/43/718 paras 55-63.

¹¹⁹Papadakis, p. 101.

The Netherlands took action only against the platform housing the R.E.M. radio station and not the 'pirate' radio ship *Veronica*. The Parliamentary discussions raised the issue that the Dutch government could exercise jurisdiction only over the platform due to the nature of its attachment to the seabed. Conversely, no action could be taken against the *Veronica* because it was ship, not under Dutch jurisdiction.¹²⁰

Underlying the confusion of trying to define installation and structure is the practice of using them interchangeably in the literature.¹²¹ Indeed, when all is said and done, there appears to be no realistic differences between structures, installations, and artificial islands. The best way to think of the structure-installation distinction is as two sides of the same coin. Some treaties and writers call the object a structure, and others call it an installation. The concept of artificial island is a little clearer with its artificial formation requirement. Apparently, UNCLOS Article 60 tried to cover all bases by including both terms in the text.

(4) **Finland v. Denmark.** Another stumbling block to clarifying the vessel versus structure or installation debate is the lack of precedent in international case law, especially under the UNCLOS regime.

¹²⁰Ibid.

¹²¹See e.g. Ibid, p. 134.

A good case would have been *The Great Belt Case*¹²² between Finland and Denmark that was to have been argued before the International Court of Justice (ICJ) on its merits in 1992. Denmark proposed to build a bridge over the Great Belt that would have seriously limited access to the sea by large ocean drilling platforms built by a Finnish manufacturer. Under the terms of an existing navigation treaty between Finland and Denmark, neither nation could interfere with vessel navigation through the Belt. Unfortunately, for this thesis, the two nations settled the case before any decision could be reached by the ICJ.¹²³ The point is that the issue is not clearly decided and reasonable countries can differ as to what constitutes a ship and what a platform.

c. US Admiralty Law Regarding Platforms.

It is the permanence of the connection of the supporting pipes or "legs" to the soil that makes a platform an "artificial island" even though surrounded by the seas. If the attachment to the ocean floor is intended to be permanent, the platform is excluded from maritime jurisdiction.¹²⁴ Structures with pilings driven through the ocean floor are platforms, not vessels.¹²⁵ The Fifth circuit

¹²²Passage through the Great Belt (Fin. v. Den.), Provisional measures, 1991 ICJ Rep. 12 (Order of July 29).

¹²³Robert Y. Jennings, "The United Nations at Fifty: The International Court of Justice Turns Fifty," 89 *American Journal of International Law* 493, (1995) pp. 501-502. See also The Netherlands Institute for the Law of the Sea, *International Organizations and the Law of the Sea: Documentary Yearbook 1992*, (Dordrecht: Martinus Nijhoff, 1992) p. 145.

¹²⁴*Rodrigue v AETNA Casualty and Surety Co.*, 395 US 352, 89 S Ct 1835, 23 L Ed 360 (1969).

¹²⁵*Rhode v Southeastern Drilling Co., Inc.*, 667 F.2d 1215 (5th Cir 1982).

applied the *Cook v Belden*¹²⁶ test in *Ducote v Keeler and Co.*¹²⁷ The test has three parts: (1) Was the craft constructed as a platform; (2) Was the craft moored at the time of the accident; and (3) Was the transportation function more than incidental to the operation of the craft.¹²⁸ In *Ducote*, the plaintiffs were successful on the first two points but failed the third when the court determined the transportation function was "purely incidental."¹²⁹

The US admiralty legal position on the definition of a platform can be distilled into a few sentences. First and foremost, a vessel is designed from the keel up as a watercraft with the intention of operating on navigable waters. A vessel is capable of self-propulsion as a primary purpose or at least of being towed for long distances, it and complies with the 72 COLREGS with respect to lights, dayshapes, and safety equipment. If a drilling rig or other mobile unit has its own propulsion and this means of propulsion is used, the United States considers it to be a ship.¹³⁰ Although a vessel may be moored for months at a time, if the anchoring devices can be retracted with the intention of periodic movement, it remains a vessel. The

¹²⁶741 F.2d 824 (5th Cir 1984).

¹²⁷See n. 33.

¹²⁸*Ibid.* p. 1003.

¹²⁹*Ibid.*

¹³⁰RADM William L. Schachte, JAGC, USN, and J. Peter A. Bernhardt, "International Straits and Navigational Freedoms," 33 *Virginia Journal of International Law* 527, (1993) pp. 529-530.

driving of mooring pilings into the ocean floor or otherwise making the attachment to the ocean floor permanent shifts the character of a vessel to that of a platform.

A significant corollary to the platform character issue is which state should exercise jurisdiction over it. In general, once a coastal state recognizes causes of action in general tort, personal injury, or death, the proceedings are subject to the coastal state's jurisdiction or corporation nationality, depending upon the terms of the exploitation contract and coastal state legislation.¹³¹ It should be noted here that jurisdiction and tort causes of action are the concerns of developed nations; lesser developed countries are not as concerned with jurisdiction or torts.¹³² There can be no all-encompassing statement regarding the jurisdiction issues raised if an MOB is considered a platform. Each prospective placement would need to be analyzed on a case-by-case basis for coastal state municipal legislation and treaty obligations. The offshore drilling rig example and illustrative law do not provide a simple paradigm by which to make decisions for MOB placement.

¹³¹Kenneth R. Simmonds, *Oil and Gas Law: The North Sea Exploration*, (New York: Oceana, 1988), pp. 302-314.

¹³²David B. Keto, *Law and Offshore Oil Development: The North Sea Experience*, (New York: Praeger, 1978), pp. 110-123.

D. CONCLUSIONS.

A number of conclusions can be drawn from the preceding analysis. The UNCLOS sea demarcation regime is best explained in Section B, sub-section 6 (a) - (e). Warships and government ships operated for non-commercial purpose retain the customary law concept of warship immunity in its entirety.

Artificial islands arise from man-deposited sea-bed material or spoil and extend above the high water mark. Artificial islands can also be formed by steel or concrete that extend above the water's surface at high tide on an underwater seamount. Unlike naturally formed islands, artificial islands do not have a territorial sea. Installations or structures are man-made features permanently attached to artificial islands or the seabed, for example, lighthouses or oil drilling rigs. Their man-made nature and permanent attachment to the seabed distinguishes artificial islands, structures, or installations from ships or vessels.

There is no "bright line" test to define when a ship stops being a ship and becomes a structure. The UN statement regarding MODUs being ships while underway and structures while drilling illustrates this gray area. Obviously, when the MODU is anchored, it is still a ship, but how deep must the drilling be for the vessel-to-structure conversion to happen? At what point does drilling

start? At anchor or when the drill touches the seabed? Although these seem rather esoteric and pedantic questions, they illustrate the possibility, however remote, of divergent opinions in this determination.

The previous analysis outlines the present state of the law. Chapter Five will conclude the MOB should be considered a warship under international law to most accurately reflect the state of the law and retain the most flexible position for the United States regarding the implementation of a MOB.

V. ARGUMENT AND CONCLUSION.

The general purpose of the following arguments is to plumb the depths and limits of UNCLOS and international law regarding the placement of an MOB regardless of the intended use. These arguments may not be diplomatically prudent or even realistic positions for the US government to consider. The purpose is to define the limits within which policy may be formulated. For example, how close to a coastal state can an MOB be anchored before the United States must unequivocally submit to the coastal nation's demands?

The crucial problem is the probable reduction of access to overseas bases, whether by political, economic, or any one of myriad reasons. This reduction of access will seriously degrade the ability of the United States to implement its historical policies of defending democracy, presence, and expanding liberal economies. The government is studying different and cost-effective ways to ensure US military forces are able to continue to carry out these policies. The TABO study was a seminal investigation that explored existing and future technology that could possibly solve the problem of reduced access to bases overseas. Of the six overall areas of technology examined, the mobile offshore base concept was chosen as a "first priority" development for DARPA. In response to the DARPA finding and significant JROC discussion, a Mission Needs Statement was

issued from the JROC, and detailed commercial and governmental comment and research have begun regarding this proposed solution to the overseas base access problem.¹³³ The question then becomes, what is the MOB in its present configuration - a ship or something else? If a ship, is it a warship or a merchant vessel? If it is something else, is it an artificial island, an installation or a structure?

As concluded in Chapter IV, a structure or artificial island can best be thought of as a lighthouse built on a man-made mound of earth above the high water mark. In the absence of clear treaty guidance, the legally persuasive argument is the MOB is not a structure or an installation within Article 60 of the Treaty, and as such, is exempt from control by the coastal state except for resource exploitation interference reasons.

Before beginning the formal argument section, it is prudent to quickly acknowledge and discuss the relatively extensive body of opinion regarding the military use of the seabed for weapons, detection, and communications devices.¹³⁴ It is important to distinguish the MOB situation from the coverage of these treaties, because if the MOB was to be considered a weapon or detection or communication device,

¹³³ See note 15.

¹³⁴ A leading discussion on this topic is between Tullio Treves, *Military Installations, Structures and Devices on the Seabed*, 74 *American Journal of International Law* 808, (1980) and Rex J. Zedalis, *Military Installations, Structures, and Devices on the Continental Shelf: A Response*, 75 *American Journal of International Law* 926, (1980).

its placement would be governed by the relevant treaties not UNCLOS. This discussion can be distinguished from the MOB situation in two critical ways. First, the MOB is concerned with the superjacent water column and not the seabed, therefore not covered by the terms of the treaty. The Seabed Treaty limits placement of devices only on the seabed.¹³⁵

Second, the MOB is not a weapon or detection and communication device per se. Although the MOB will undoubtedly have weapons and detection and communications devices upon it, in this manner, it is functionally no different than any ship anchoring on the high seas. If the weapons placement, detection, and communication devices treaties do not apply, the only remaining limit to the MOB's placement arises under the UNCLOS regime.

A. UNCLOS REGIME.

1. Territorial Sea.

Since a coastal state has sovereignty over the territorial sea limited only by the right of innocent passage, a reasonable conclusion is the United States may not anchor a MOB within 12 NM of a coastal nation without the coastal state's permission. Since UNCLOS does not limit the existing doctrine of innocent passage, there is,

¹³⁵The Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and Ocean Floor, 23 UST 701, entered into force, May 18, 1972.

presumably nothing to limit the right of innocent passage of an MOB through a coastal state's territorial sea.

The situation is not significantly altered if the focus of MOB activity is centered upon a third state, not the coastal state. If the MOB is anchored well within the territorial sea of Country Orange, for example, Country Green does not have a cause of action under UNCLOS to force the relocation of the US MOB. Of course, realistic determinations of relations between countries need to be considered before placing a coastal nation in a sensitive political position, and all Orange/Green treaty obligations must not be hindered. For example, placing a MOB in the Omani EEZ could possibly alienate Oman from other Arab nations to the detriment of U.S.-Omani relations. This is not to argue for an expanded understanding of coastal state rights in the EEZ, but rather to point out the effects such a unilateral decision may have on a U.S. ally.

2. Contiguous Zone.

The contiguous zone is the first area of "friction" for possible MOB placement. Although the area beyond 12 NM is open to all nations, the coastal state may limit actions in the zone to prevent customs, immigration, fiscal, or sanitary law violations in the coastal state or territorial sea. If the United States places a MOB in a coastal state's contiguous zone with the intention of some military, surveillance, or peaceful (e.g., humanitarian relief) action

in that country, the coastal state could argue that the presence of the MOB violates one of the four areas of coastal state control. The best argument and most realistic situation is if the MOB can be shown, or even alleged, to have violated the sanitary laws of the coastal nation. US MOB generated pollution in the territorial sea, no matter how slight, would mandate moving the MOB outside the coastal state's contiguous zone or, at a minimum, solving the problem at the source of the pollution.

If the MOB is anchored in the contiguous zone of Country Orange, and the activity is focused on Country Green, the clearest parallel is the territorial sea argument. If there is no violation of the coastal state's laws, and Country Orange does not eject the MOB, Country Green has no UNCLOS causes of action to force MOB relocation. Again, real world politics and obligations must be considered prior to MOB placement.

3. EEZ.

The EEZ represents the first significant departure from traditional division between the territorial seas and the high seas. As argued earlier, historically all waters seaward of the contiguous zone were high seas. UNCLOS established a regime wherein the coastal state may exercise sovereign control in the EEZ in three general areas: (1) living resources. (2) non-living resources, and (3) structures, marine research, and environmental preservation.

However, "[s]tates simply never agreed to abandon such rights (naval maneuvers and exercises within the EEZ) in all the semi-enclosed areas of the world, including all those bordering Europe and Arabia."¹³⁶

If a MOB were placed in an EEZ and the coastal state complained of interference with its management of the living resources of the EEZ, it would be prudent for the United States to consider moving the MOB during the subsequent dispute resolution procedures. Living resources mean the control of fish stocks and catch limits in the EEZ. If the United States wished to challenge the claim of the coastal state, there are four general avenues of dispute resolution.

a. Dispute Resolution Procedures.

First, there are the normal diplomatic methods of dispute resolution between nation-states. Second, Part XV of the Treaty concerns dispute resolution. As set forth in most international agreements, all parties agree to settle disputes by peaceful means.¹³⁷ It should be noted at this point that the coastal state has the right to "board, inspect, and... arrest" vessels to ensure conformity with UNCLOS and their sovereign management of the EEZ.¹³⁸ Mitigating against this argument is the general grant of immunity for warships and government ships operated for non-

¹³⁶Oxman, Regime, p. 839.

¹³⁷UNCLOS Article 279.

¹³⁸UNCLOS Article 73(1).

commercial purpose have under UNCLOS.¹³⁹ Under Article 280, the contentious states may agree to their own method of peaceful dispute resolution.

Third, in the event the nations cannot agree on an alternative resolution mechanism or the chosen forum is unsuccessful, either nation may invite Article 284 Conciliation procedures. If both nations agree on Conciliation, Annex V provides detailed procedures for Conciliation Board selection and management. The Conciliators are required to provide a written report, with their findings of fact and conclusions of law to the Secretary-General and parties within 12 months of convening.¹⁴⁰ It is important to note that the findings of the Conciliators are not binding on either party.¹⁴¹

Finally, if no adequate amicable solution can be found, one nation may submit a compulsory claim under Article 286.¹⁴² Any party to the claim may submit the dispute to "the proper tribunal" having jurisdiction.¹⁴³ Article 287 allows a nation to choose a dispute resolution tribunal when the treaty is "signed, ratified, or acceded to... or anytime thereafter." The practical effect of this

¹³⁹UNCLOS Article 32.

¹⁴⁰Annex V, Article 7(1).

¹⁴¹Annex V, Article 7(2).

¹⁴²The title of this section under Part XV Settlement Dispute, Section 2, including article 286, is Compulsory Procedures Involving Binding Decisions.

¹⁴³Article 287(1) confers upon any of the four tribunals in Article 286 a general grant of jurisdiction if the countries can only agree to one tribunal. If the countries cannot agree on a tribunal, the dispute is adjudicated under Annex VII Arbitration procedures (Article 286(5)).

article is to allow the parties to select one of the four approved tribunals for compulsory adjudication of their dispute. The four tribunals are: (1) the International Tribunal for the Law of the Sea (established by Annex VI), (2) the International Court of Justice, (3) an arbitral tribunal established under Annex VII and, (4) a special arbitral tribunal under Annex VIII.

Annex VII, Arbitration, is a binding, final decision made by a 5-person panel selected by the parties to the dispute. Annex VIII, Special Arbitration, has a specific charter of jurisdiction for issues relating to: "(1) fisheries, (2) protection and preservation of the marine environment, (3) marine scientific research, and (4) navigation, including pollution from vessels and dumping[.]"¹⁴⁴ The Special Arbitration decision is also a binding, final decision from a 5-person panel selected by the parties to the dispute.

The conclusion to be drawn from the preceding discussion is that UNCLOS outlines a very specific chain of dispute resolution procedures. The common thread of logic running through the entire process is the promise and commitment to settle all disputes peacefully. The process starts with normal diplomatic measures, to include everything from the exchange of Ambassadors to the "good

¹⁴⁴Annex VIII, Article 1.

offices" of the United Nations or a third nation.

Secondly, the nations resort to voluntary and non-binding Conciliation. Finally, upon failure of the voluntary option or at the request of one of the countries, the dispute may be submitted to compulsory jurisdiction and a binding decision at the hands of one of the four tribunals outlined in Article 287. The availability of these differing tribunals, all with a general grant of jurisdiction, allows for a certain degree of 'forum shopping' by the disputing nations. The desired result may be pre-ordained by selection of a certain tribunal over another. For example, the 5-person Arbitration panels may be perceived as more informed regarding UNCLOS issues than the 15-person International Court of Justice(ICJ). Conversely, if the opposite result is desired, the ICJ may be selected. Or the nations may not be able to agree on five people for a panel forcing the ICJ to decide the issue. At this point, the process is a function of who sits on which board and will that person be sympathetic to any nation's claim.

b. Factual Standard of Proof.

At the end of fisheries management dispute resolution process discussion, the crux of the dispute was a factual issue. Does the MOB, as a matter of fact, interfere with the coastal states' management of fish populations, or is the coastal state's claim merely a "Trojan Horse" to

expand its sovereign jurisdiction over the EEZ? This is the elemental question any tribunal will need to address when adjudicating an UNCLOS dispute. The coastal state should be able to show actual interference with fisheries management (declining populations, reduced catches, etc.) or, at the minimum, a plan for fisheries management that pre-dates placement of the MOB. There is no standard of reasonableness in the language of the Treaty, so the coastal state may argue that any interference, no matter how unreasonable, justifies its insistence to move the MOB. The best response to this claim refers back to Articles 61-68. The coastal state must take into account all factors when making resource decisions. For example, in Article 61(2) the coastal state must use the "best scientific evidence" to prevent over-exploitation. Article 62(1) requires the coastal state to promote "optimum utilization" of the resources without "prejudice to Article 61." This language can be argued to create a "reasonableness" standard in fish stock management cases. The language, tone and spirit of the document all argue for a general reasonable approach to all UNCLOS issues, not only fisheries disputes.¹⁴⁵

The non-living asset management grant of coastal state jurisdiction in the EEZ follows the same dispute resolution framework and factual issue determination process

¹⁴⁵D.P. O'Connell, *The International Law of the Sea*, Vol. 1, (Clarendon: Oxford, 1982) pp. 57-58.

as the living resource analysis. If the coastal nation objects to the MOB because it allegedly interferes with the coastal state's management of non-living resources, it becomes a factual determination paralleling the living asset arguments to be solved within the dispute resolution framework.

The more difficult and potentially litigious issue concerns the third grant of coastal state jurisdiction in the EEZ regarding structures, marine research, and environmental preservation. Article 60 grants the coastal state the "exclusive right" to construct, authorize, and regulate the construction and operation of artificial islands, installations and structures within the EEZ. The contentious issue becomes whether the MOB is an artificial island, structure, installation, or ship.

Given the present state of the law, it would be very difficult for a coastal state to prove jurisdiction over the MOB on the grounds that the MOB constitutes an artificial island, structure, or installation constructed for extractive purposes in the EEZ.

4. Continental Shelf.

The Continental Shelf arguments mirror the EEZ, except that the coastal state has less jurisdiction regarding waters of the area. The coastal state may exercise control over the seabed of the continental shelf but not the superjacent waters. This removes the ability of the coastal

state to force movement of the MOB for fisheries management reasons. All grants of authority are the same as the EEZ with the same arguments and counter-arguments.

5. High Seas.

MOB deployment on the high seas would only be restrained by the "due regard" provisions of Article 87(2). The high seas are ostensibly reserved for peaceful purposes, but Oxman makes a persuasive argument that the admonition in Article 88¹⁴⁶ is primarily aspirational and that nothing was intended to limit past practice of warships on the high seas.¹⁴⁷ The intent was to protect the freedom of military action on the high seas and not to limit it. The most notable feature of UNCLOS regarding warships is that there is nothing surprisingly new.¹⁴⁸ Even if the United Nations were to eventually add substance and enforcement mechanisms to this article, the MOB would still be beyond the reach of UNCLOS. The three presence functions (logistics hub, nation building, and humanitarian support) discussed in Chapter III would likely be well within the peaceful definitions of Article 86. The other three functions (force projection, forward operating base, and deep attack and strike) concern laws of war and would be subject to the terms of future UNCLOS modifications.

¹⁴⁶The high seas shall be reserved for peaceful purposes.

¹⁴⁷Oxman, *Regime*, pp. 930-833; See also Truver, 2010, p. 1242.

¹⁴⁸*Ibid*, p. 861.

B. Ship or Structure?

The most useful tool for this determination is the "totality of circumstances" test outlined in Chapter IV. Using that analysis, the MOB is more like a ship than a structure. Although it does not look like the traditional concept of a ship, it is designed and used for water travel, has propulsion (or possible of being towed), displaces water, has a rudder, and does not permanently attach itself to the seabed. The United States could add features to support the conclusion that the MOB is a ship. The MOB would likely display ship lights and day shapes in accordance with 72 COLREGS, and be subject to normal maritime risk.

An MOB anchored beyond a coastal state's contiguous zone is clearly not an artificial island placed on man-deposited seabed above the high water mark. Nor should it be argued that the MOB is a structure or installation under UNCLOS. The very advantage of the MOB, i.e., mobility (no matter how slow), distinguishes it from a structure under UNCLOS and customary law, and from an installation that is characterized by permanent attachment to the seabed.

The next issue is whether the MOB is a vessel operated by a government for non-commercial purposes or a warship. To preserve the widest grant of freedom of action and to support the conclusion that the MOB is a ship, the United States should consider the MOB a ship under UNCLOS Article

29. The MOB should fly the US flag, be commanded by a commissioned officer (of any branch, not necessarily Navy), and be manned by a crew under military discipline. Although a government ship operated for commercial purposes has the same grant of immunity as a warship, clear warship identification would preclude any questions as to the MOB's actual status. Since the government ship for non-commercial purposes is a new category, it would be prudent to plan for the clearest and most precise definition.

As has been shown, the MOB can be thought of as a non-traditional type of ship, but a ship nonetheless. The most advantageous way for the United States to treat the MOB is as a warship. The ship status permits relatively unencumbered placement of the MOB beyond the contiguous zone of any coastal State. Any disputes regarding MOB placement have specific and well-defined, peaceful dispute resolution procedures. In conclusion, the MOB is ship and can be anchored anywhere a traditional appearing ship may legally anchor.

This conclusion may have far-ranging implications for strategic planners and CinCs. The foreknowledge that an MOB may be anchored anywhere beyond the 12 mile contiguous zone instead of beyond the 200 mile EEZ significantly affects how a operation may be planned and conducted. For example, instead of depending on constant aircraft carrier presence in the Arabian Gulf, an MOB in the area would solve the US

force presence requirement without depending on a host country for permission to conduct operations from that country. This critical determination significantly expands the realm of options for planners and Commanders.

Additionally, a well-reasoned and sensible international legal position adopted by the United States, enhances the credibility of UNCLOS and the industrial nations. By considering UNCLOS, the United States displays a commitment to the validity of international law and respect of the rights of the other nations of the world.

LIST OF REFERENCES

- Aspin, Secretary of Defense Les, *Report on the Bottom Up Review*, (Washington, D.C: October 1993).
- The BDM Corporation, *Technical Alternatives to Bases Overseas (TABO)*, Prepared for the Defense Advanced Research Projects Agency, May 1988.
- Boggs, "Delimitation of Seaward Areas Under National Jurisdiction," 45 *American Journal of International Law* 240 (1951).
- Brittin, Burdick H., *International Law for Seagoing Officers*, 5th ed. (Annapolis: Naval Institute Press, 1986).
- Colson, Statement of Hon. David, Deputy Assistant Secretary for Oceans, Department of State, before the Committee on Foreign Relations (Washington, DC, August 11, 1994).
- The Commission on Integrated Long-Term Strategy, *Discriminate Deterrence*, (Washington, D.C.: U.S. Government Printing Office [U.S. GPO], 1988).
- The Commission on Integrated Long-Term Strategy, Regional Conflict Working Group, *Supporting U.S. Strategy for the Third World Conflict*, (Washington, D.C.: U.S. Government Printing Office [U.S. GPO], June 1988).
- The Commission on Integrated Long-Term Strategy, Future Security Environment Working Group, *The Future Security Environment*, (Washington, D.C.: U.S. Government Printing Office [U.S. GPO], October 1988).
- Freestone, David and Ton Ijlstra, eds., *The North Sea: Basic Legal Documents on Regional Environmental Co-operation*, (Dordrecht: Martinus Nijhoff, 1992).
- Galdorisi George, CAPT, USN, The United Nations Convention on the Law of the Sea: A National Security Perspective, 89 *American Journal of International Law* 208 (1995).
- Gibson Charles D., *Merchantman? or Ship of War?: A Synopsis of Laws; State Department Positions; and Practices Which Alter the Peaceful Character of U.S. Merchant Vessels in Time of War*, (Camden: Ensign Press, 1986).

- Gordon, Michael R., "Admiral With High-Tech Dreams Has Pentagon at War With Itself," *New York Times*, 12 December 1994, p. 1.
- Harkavy, Robert E., *Bases Abroad: The Global Foreign Military Presence*, (New York: Oxford University Press, 1989).
- Holzer, Robert, "'Floating Island' Concept Gains Support in U.S. Military," *Defense News* April 18-24, 1994.
- Jennings, Robert Y., "The United Nations at Fifty: The International Court of Justice Turns Fifty," *89 American Journal of International Law* 493, (1995).
- Keto, David B., *Law and Offshore Oil Development: The North Sea Experience*, (New York: Praeger, 1978).
- Knight, Gary and Hungdah Chiu, *The International Law of the Sea: Cases, Documents, and Readings*, (New York: Elsevier Applied Science, 1993).
- Lasswell, James A., COL, USMC, Presence - Do We Stay Or Do We Go? *Joint Forces Quarterly* (Summer 1995).
- Lee, Luke T., "The Law of the Sea Convention and Third States," *77 American Journal of International Law* 541 (1984).
- Logistics Management Institute, *General Concept of Operation for the Mobile Offshore Base (MOB)*, 16 December 1994.
- Logistics Management Institute, *Concept of Operations: Mobile Offshore Base (MOB) for the United States Central Command (CENTCOM)*, 14 February 1995.
- Logistics Management Institute, *Concept of Operation: Mobile Offshore Base (MOB) for the United States Atlantic Command (USACOM)*, 14 February 1995.
- Lucas, Jo Desha, 3rd ed., *Cases and Materials on Admiralty*, (New York: Foundation Press, 1987).
- Nandan Satya V. and Shabtai Rosenne, eds., *United Nations Convention on the Law of the Sea 1982: A Commentary*, vol. II, (Dordrecht: Martinus Nijhoff, 1993).
- A National Security Strategy of Engagement and Enlargement*, (Washington, D.C.: U.S. Government Printing Office [U.S. GPO], February 1996).

The National Military Strategy of the United States, (Washington, D.C.: U.S. Government Printing Office [U.S. GPO], July 1995).

The Netherlands Institute for the Law of the Sea, *International Organizations and the Law of the Sea: Documentary Yearbook 1987*, (Dordrecht: Martinus Nijhoff, 1987).

The Netherlands Institute for the Law of the Sea, *International Organizations and the Law of the Sea: Documentary Yearbook 1988*, (Dordrecht: Martinus Nijhoff, 1988).

The Netherlands Institute for the Law of the Sea, *International Organizations and the Law of the Sea: Documentary Yearbook 1992*, (Dordrecht: Martinus Nijhoff, 1992).

Note, *Jurisdictional Problems Created by Artificial Islands*, 10 *San Diego Law Review* 638 (1973).

O'Connell, D.P., *The International Law of the Sea*, Vols. 1 & 2 (Clarendon: Oxford, 1984).

Office of Legal Affairs, Division for Ocean Affairs and the Law of the Sea, United Nations, *The Law of the Sea: National Legislation on the Exclusive Economic Zone*, (New York: United Nations, 1993).

Owens, ADM William A., *High Seas: The Naval Passage to an Uncharted World*, (Annapolis: Naval Institute Press, 1995).

Owens, Vice Chairman, Joint Chiefs of Staff ADM W.A., letter to President, National Defense University, Ser CM-466-94, 22 September 1994.

Oxman Bernard H., *The Regime of Warships Under the United Nations Convention on the Law of the Sea*, 24 *Virginia Journal of International Law* 809, (1984).

Papadakis, Nilos, *The International Legal Regime of Artificial Islands*, (Leyden: Sijthoff, 1977).
pp. 96-99.

The Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and Ocean Floor, 23 UST 701, entered into force, May 18, 1972.

Sanger, Clyde, *Ordering the Oceans: The Making of the Law of the Sea*, (London: Zed Books, 1986).

Schachte, RADM William L., JAGC, USN, and J. Peter A. Bernhardt, "International Straits and Navigational Freedoms," 33 *Virginia Journal of International Law* 527, (1993).

Simmonds, Kenneth R., *Oil and Gas Law: The North Sea Exploration*, (New York: Oceana, 1988).

Sohn Louis B. and Kristen Gustafson, *The Law of the Sea*, (West: St. Paul, Minn., 1984).

Tierney, LT T., Department of the Navy, Office of the Judge Advocate General, 06 November 1995.

Treves, Tullio, Military Installations, Structures and Devices on the Seabed, 74 *American Journal of International Law* 808, (1980).

United Nations Convention on the Law of the Sea, entered into force, Nov. 16, 1994, UN Doc. A/CONF.62/122 (1982).

Third United Nations Conference on the Law of the Sea (1973-74) Vol. 2, Official Records (United Nations: New York, 1975) 22nd meeting, 31 July 1974.

United Nations General Assembly, Measures to Prevent Infringement of Safety Zones Around Offshore Installations or Structures, Adopted 4 January 1988, Doc.no:A25/Res.621.

Van Dyke, Jon M., *Consensus and Confrontation: The United States and the Law of the Sea Convention*, (Honolulu: University of Hawaii Press, 1984).

von Glahn, Gerhard, *Law Among Nations: An Introduction to Public International Law*, 5th ed. (New York: MacMillan, 1986).

Wodliffe, John, *The Peacetime Use of Foreign Military Installations under Modern International Law*, (Dordrecht: Martinus Nijhoff, 1992).

Yost, David S., *The Future of U.S. Overseas Presence*, *Joint Forces Quarterly* (Summer 1995).

Zedalis, Rex J., Military Installations, Structures, and Devices on the Continental Shelf: A Response, 75 *American Journal of International Law* 926, (1980).

APPENDIX

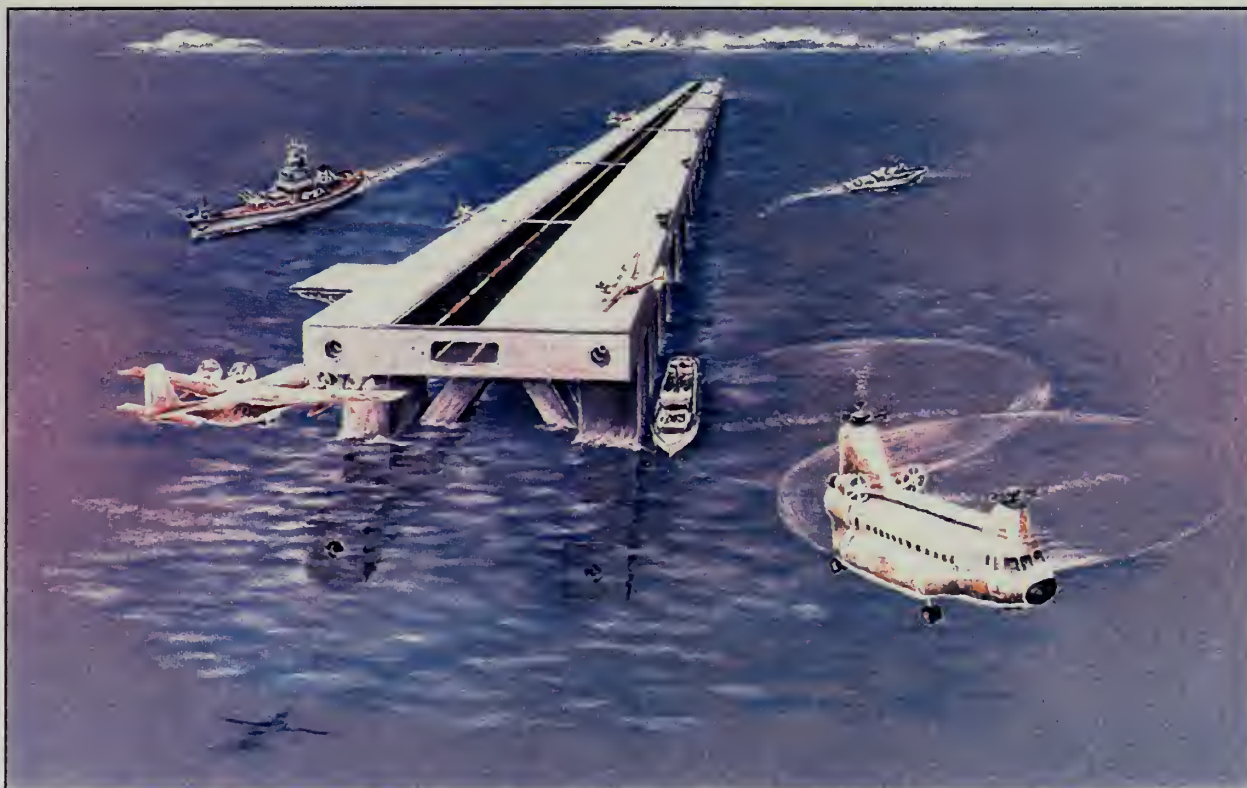
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C

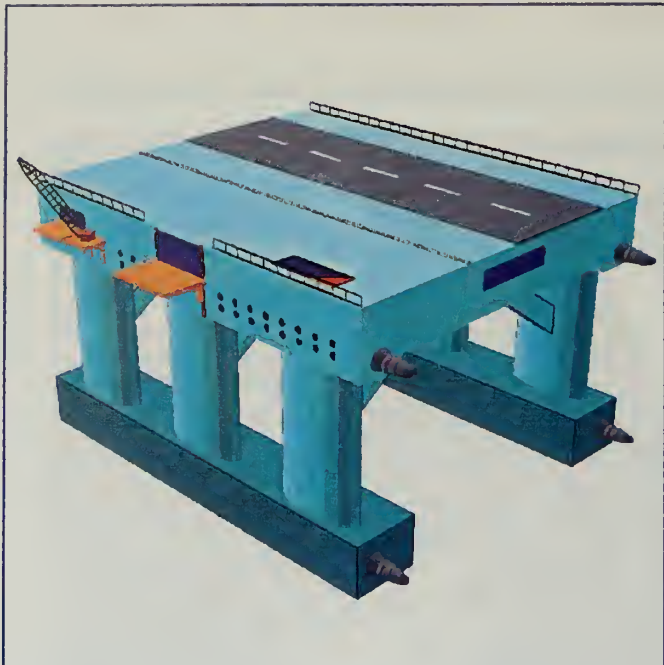
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145,000 short tons
164,000 short tons

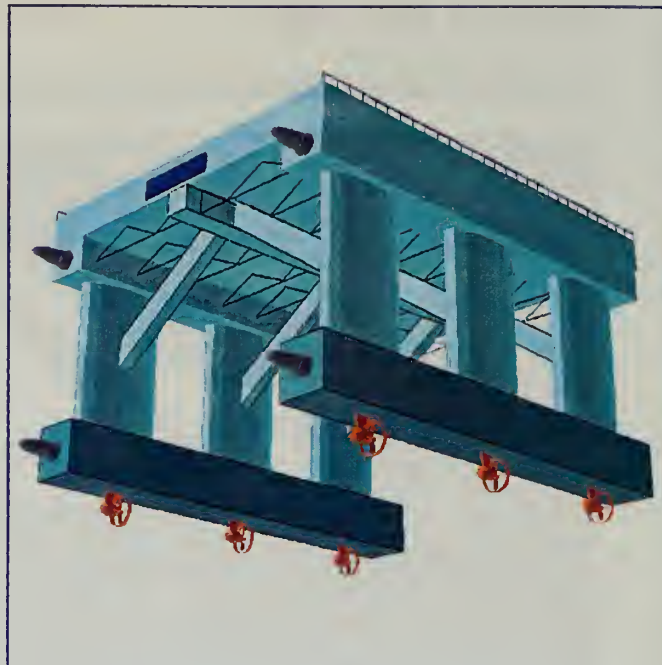
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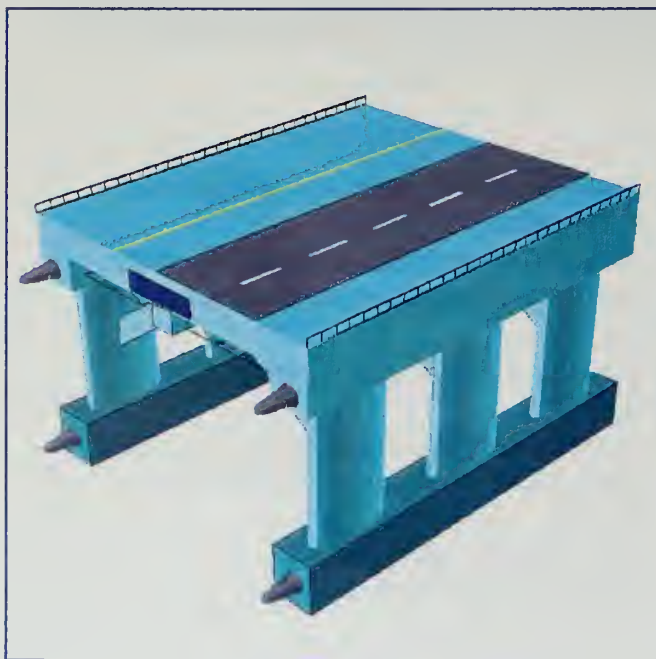
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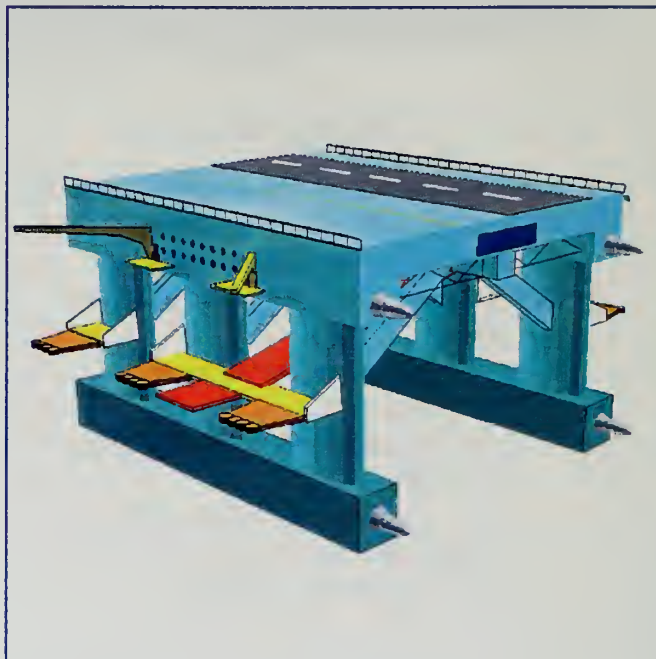
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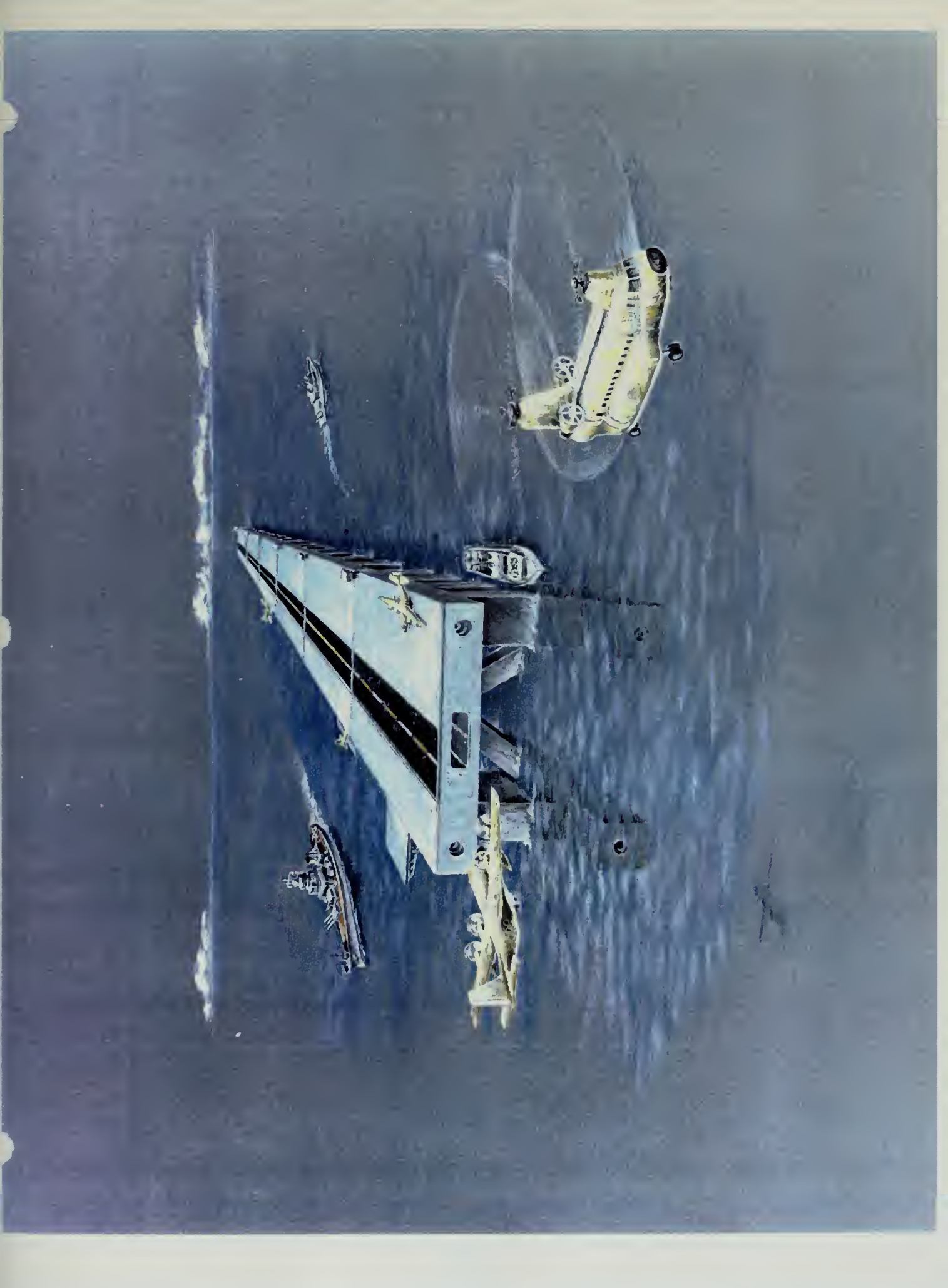
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